

MANUFACTURERS' RECORD

A Southern Industrial, Railroad and Financial Newspaper.

VOL. XVI. No. 13.
WEEKLY.

BALTIMORE, NOVEMBER 2, 1889.

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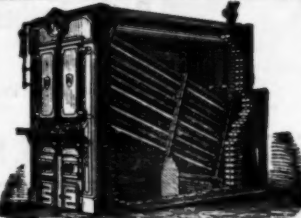


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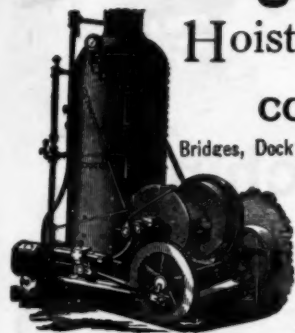
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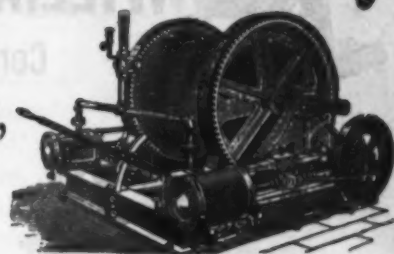
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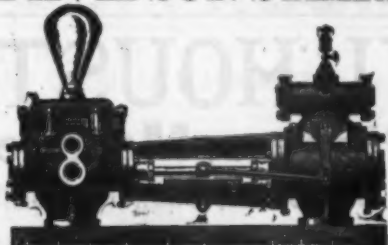
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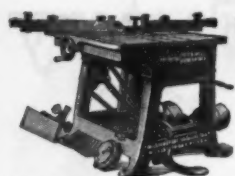
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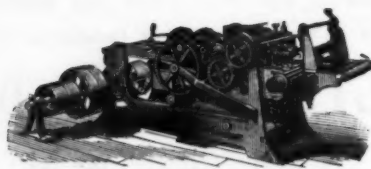
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Improved WOOD-WORKING Machinery.



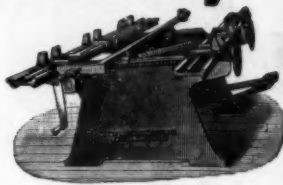
Gang Rippling Machines.



'Happy Thought' Planer and Matcher.



S. F. Saw Table.



Door and Blind Clamp.

LEVI HOUSTON, Wood-Working Machinery.

Planers, Matchers, Panel Planers, Moulders,
Slat Saws, Stickers, Boring Machines, Tenoners, Swing Saws, Mortisers,

Panel Raisers, Sash Dovetailing Machines,

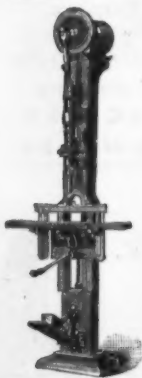
SAND PAPERING MACHINES,

Blind Rabbeting Machines, Etc.

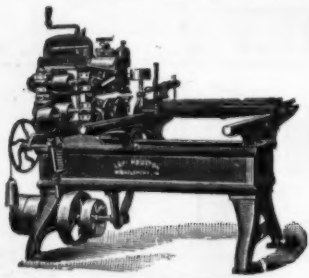
On the Philadelphia & Erie and Philadelphia & Reading Railroads.

MONTGOMERY,

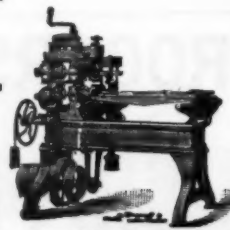
Lycoming Co., Pa



SASH MORTISER.



DOOR TENONER.



SASH TENONER.

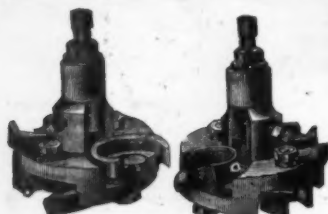


DOOR MORTISER.

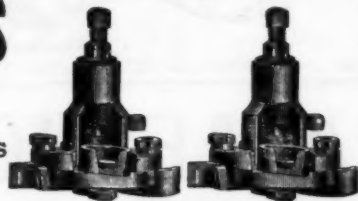
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The Cheapest! The Strongest! The Most Durable!

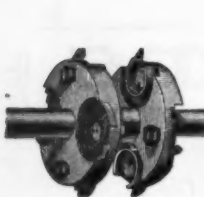
AND YET THE LIGHTEST AND EASIEST RUNNING MATCHER HEADS
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The Bits are arranged in upper and lower series, and secured to a Head having seats alternately inclined for the purpose of giving the side clearance to their cutting points. This explains why these Bits hold their shape and turn out standard work until used up; the entire circle of Bit being tool cutting edge. This diagram represents a Bit (D) in the position it occupies when making a cut; the Bit (C) which follows to complete the work, is given in outline.

Samuel J. Shimer,



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Milton, Penn.



DOOR HEAD.



SASH HEAD.



Wood Working Machinery



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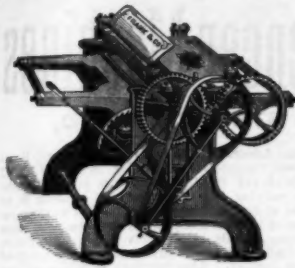
H. B. SMITH MACHINE CO.

Send for catalogue and visit our extensive
warerooms if possible.

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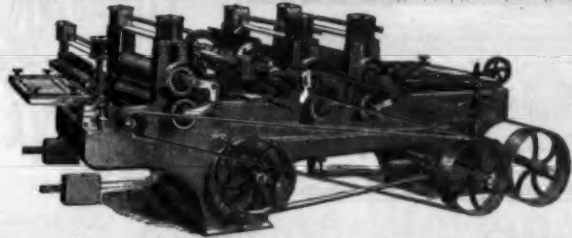
PHILADA, PA., U. S. A.

WOOD-WORKING MACHINERY.

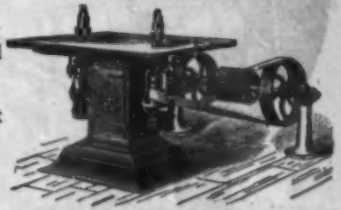


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our
latest price-list
Mention
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MACHINERY AND COMPLETE OUTFITS.

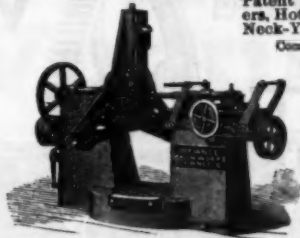
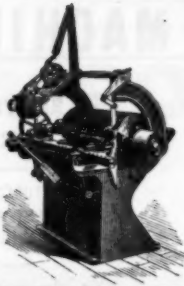
FRANK & CO. 176 TERRACE STREET, BUFFALO, N. Y.

DEFIANCE MACHINE WORKS, Defiance, Ohio. ESTABLISHED 1850.

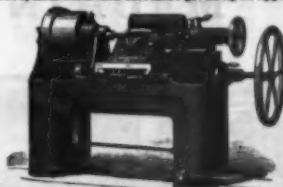
Manufacturers of **HUB, SPOKE, WHEEL, BENDING, WAGON AND CARRIAGE MACHINERY.**

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Complete Outfits Furnished, Estimates and Circulars given upon application.

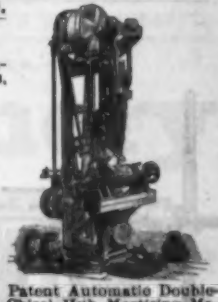
Patent Automatic Combined Spoke Turning and Squaring Machine for common, seven patent, or sharp-edged spoke turning. Capacity 2,500 per day.



Wheel Boxing Machine.



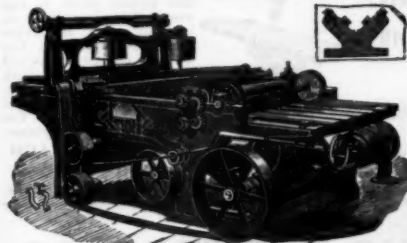
Patent Hub Turning Machine.



Patent Automatic Double-Chisel Hub Mortising Machine. Built in three sizes.

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Diagonal Planer and Polisher.



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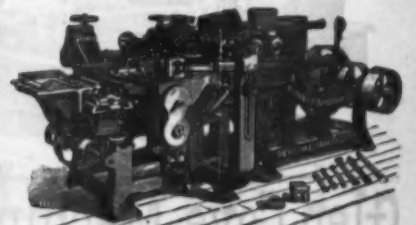
WILLIAMSPORT, PA., U.S.A.

Manufacturers of the Finest and Most Complete Line of

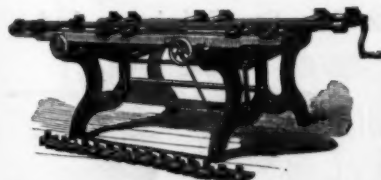
Wood-Cutting Machinery

IN AMERICA.

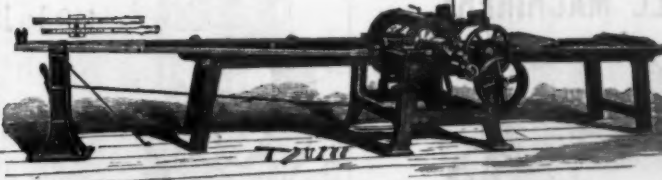
Write for Illustrated Catalogue and Special Prices.



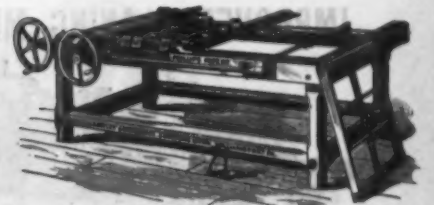
Improved 9-inch and 10-inch Moulder



Patent Door and Blind Clamp, with or without Sash Attachment.



No. 1 New King Power Feed Gang Rip Saw.



Phillips Patent Sash Clamp.

The Largest Dry-Kiln Plant in the World. MERIT WINS.



"THE STANDARD" KILN has points of MERIT not possessed by any other make. Solely for this reason a contract for TWENTY KILNS, with a daily drying capacity of 200,000 feet (13-85'x17'x9' and 7-125'x17'x9') has been awarded to us by the KENTUCKY UNION LAND CO., Clay City, Ky.

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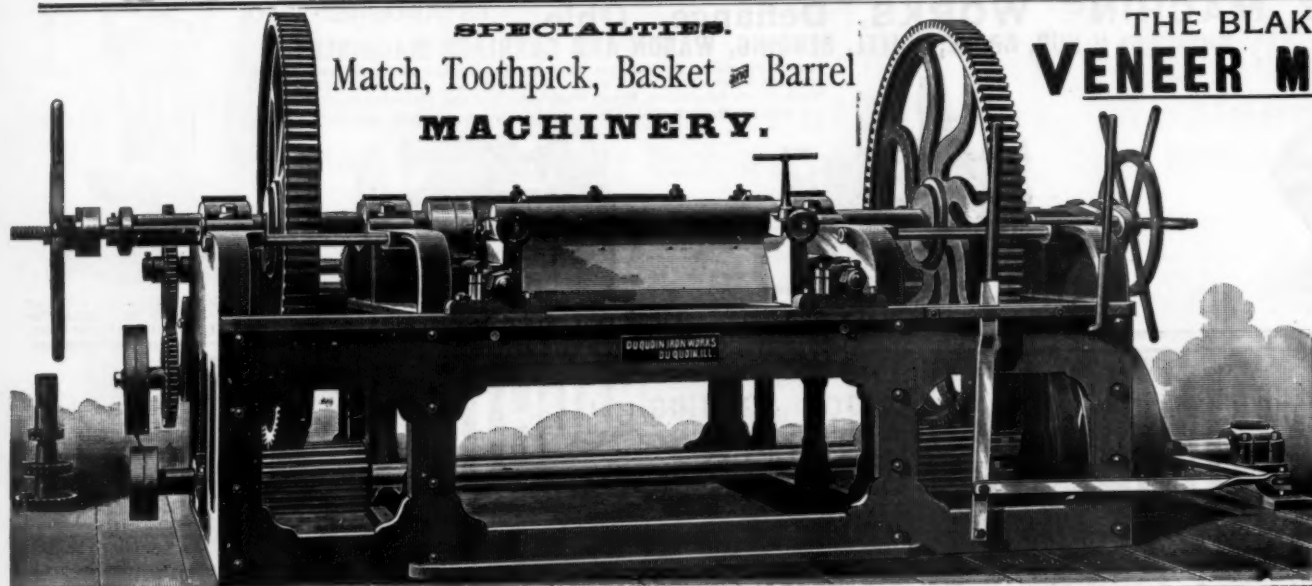


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STRONG, SOLID,

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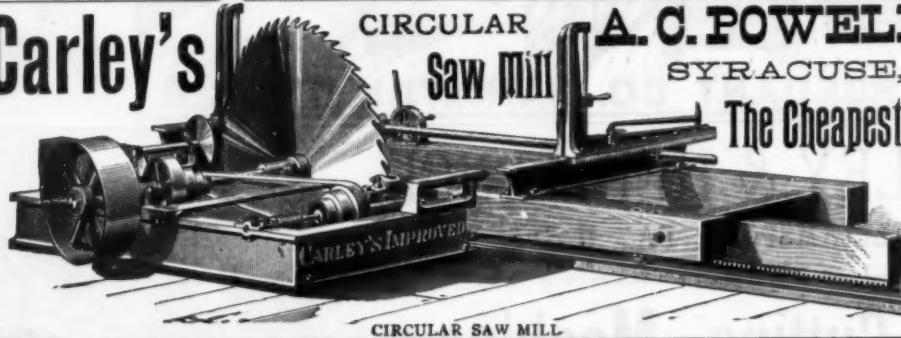
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Prices, \$250 to \$600.

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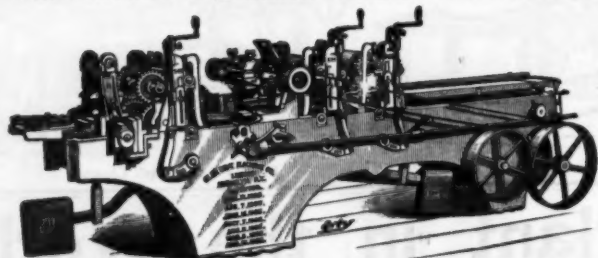


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Scroll Sawing
MACHINE.**

3,000 in use; made in four styles; prices to suit everybody; even strain; no jar; air pump, and every known improvement. You can stop, change the saw and start in four seconds. Both tilting and stationary table. Mention this paper and send for catalogue and prices. You can't afford to buy any other.

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IMPROVED PLANING MILL MACHINERY.



No. 2.—Fast-Feed Planing and Matching Machine. 13 feet 9 inches long. Weighs 8,700 pounds.

Heavy Fast Feed Planing and Matching Machines, Double Surfacers, and Inside Molding Machines a Specialty.

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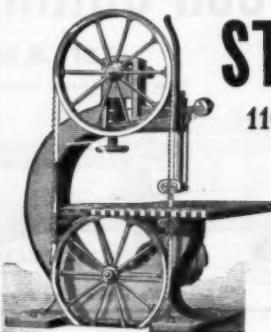
The Detroit Saw Works, Detroit, Mich.

Manufacturers of PATENT GROUND

Circular and Band SAWS,

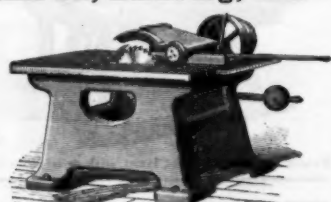
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Moulding Knives, Etc. Dealers in Saw Mandrels, Emery Grinders, Files, Belting, Gummers, Emery Wheels and Mill Supplies. Correspondence Solicited.



\$80 will buy the best Band Saw in the world.

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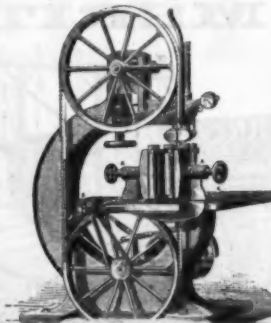


\$100 will buy the best Automatic Rip Sawing Machine, (weather-boarding attachment included) and Saw.

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Improved Wood-Working Machinery

OF EVERY DESCRIPTION,

For Planing Mills, Sash, Door and Blind Shops, Furniture, Carriage and Wagon Factories,
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EVERY MACHINE TESTED AND WARRANTED.

THOS. P. EGAN, Pres't.

EDWIN RUTHVEN, Sec'y.

FREDERICK DANNER, Supt.

Wood-Working Machinery

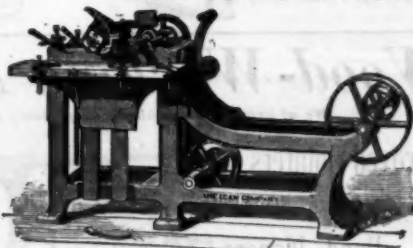
The Largest and Most Complete Line in the United States is Manufactured by

THE EGAN COMPANY,

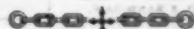
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Vertical Boring Machine.

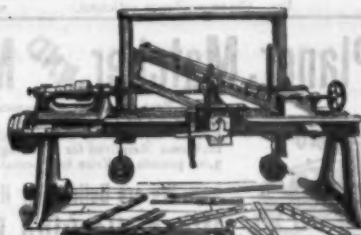


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Furnished.

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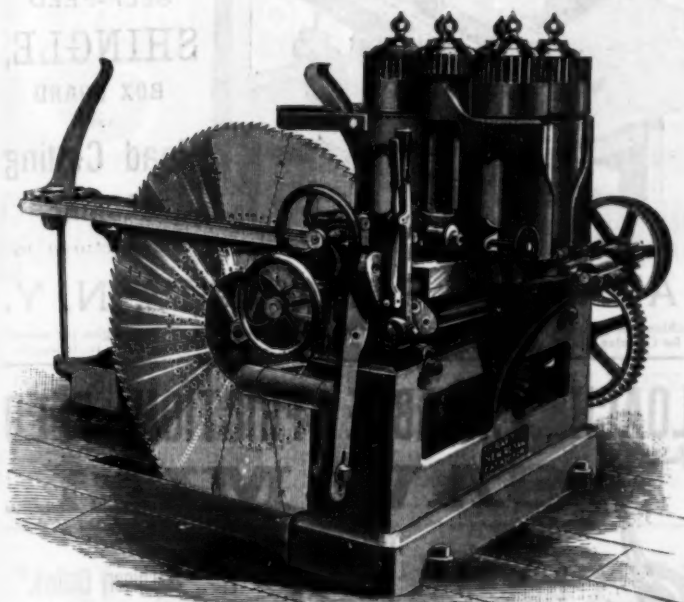


No. 4 Mortiser.

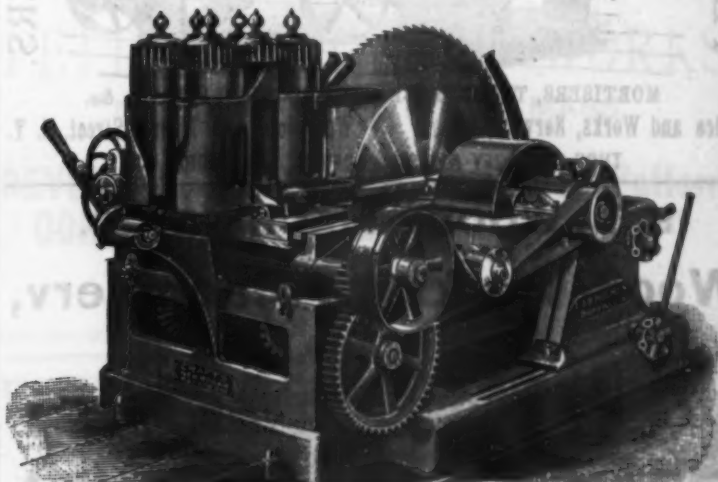
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FOR WORKING WOOD.

Made from New Patterns with all the Latest Improvements.

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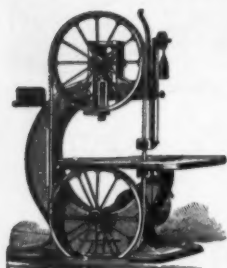
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No. 3 Band Saw.

MODERN
DESIGNS.



No. 2 Mortiser.

NEW IN
CONSTRUCTION.



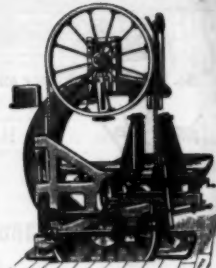
No. 3 Scroll Saw.

UNEQUALED
IMPROVEMENTS.



Swing Saw.

ECONOMICAL
IN OPERATION.



No. 4 Scroll and Re-Saw.

Wood-Working Machinery.

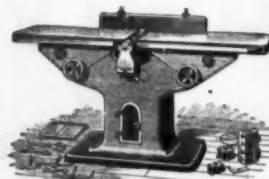
PEARL AND
BUTLER STS.

Cincinnati, O., U. S. A.

CORDESMAN, MEYER & CO.

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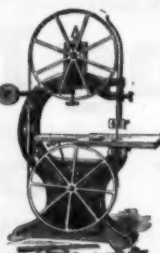
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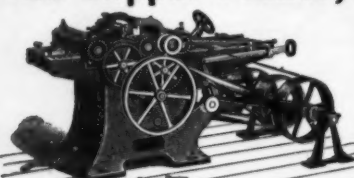
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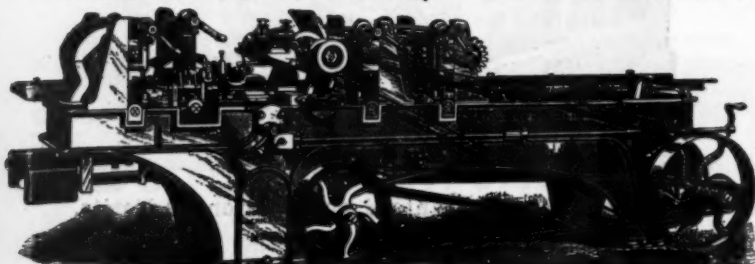
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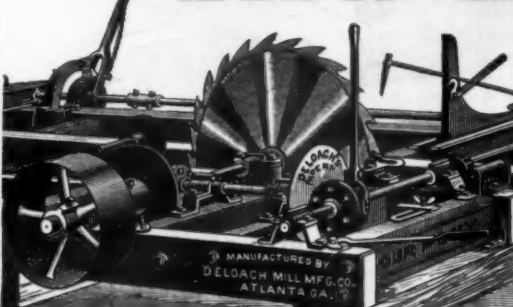
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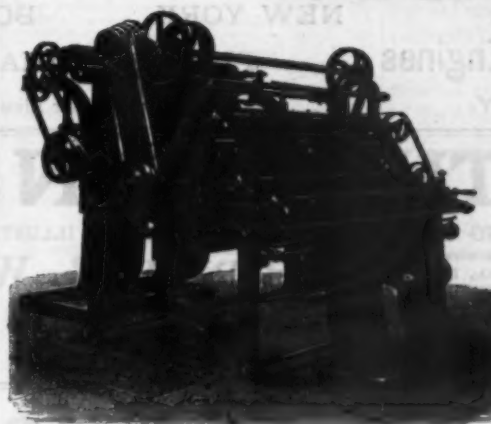
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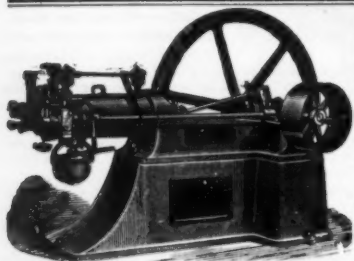
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BALTIMORE, NOVEMBER 2, 1889.

To Draw Capital South.

With a view to attracting the attention of the entire financial interests of the United States to the growth of the South, to the advantages of this section and to the opportunities for profitable investments of all kinds that are to be found in every State, from Maryland to Texas, the MANUFACTURERS' RECORD will shortly publish a "Special Bankers' Edition," a copy of which will be sent to every bank (national, State and private) in the United States, to loan and trust companies, brokers, leading insurance companies and financial institutions generally. Nothing of this character has ever before been undertaken in this country, and never before has such an opportunity been afforded to reach every financial institution in the United States. The value of this to the South cannot be overestimated. It will draw the attention of the entire banking and allied interests of the whole country to the marvellous advancement and possibilities of the South. For Southern bankers, owners of mineral and timber properties that are for sale, real estate agents, transportation lines, and all others who wish to reach the moneyed men of the whole country, this "Special Bankers' Edition" is the best advertising medium ever offered. It will result in attracting many millions of dollars to the South for investment, and in inducing many thousands of people to make a personal investigation of the advantages and the resources of this section.

BUENA VISTA'S RESOURCES.—The distinguished geologist, Dr. William H. Ruffner, has prepared an elaborate report upon the mineral resources of the property of the Buena Vista Co., of Buena Vista, Va. Dr. Ruffner has made a special study of the subject, and his report, which is now in the hands of the printers, will, no doubt, prove very interesting. Dr. Ruffner sends a letter to the MANUFACTURERS' RECORD which is published to-day, based on his investigations, that is of much interest.

The Outlook for Manganese.

The MANUFACTURERS' RECORD recently called attention to the scarcity of manganese ores, and urged the importance of more thorough investigations in the South, as we are confident that there is an abundance of manganese in that section. Bearing directly upon this line, the American Manufacturer, of Pittsburgh, discusses the rapid advance in prices of manganese and the shortness of the supply. The Manufacturer says:

"One of the most remarkable 'jumps' in prices in the history of the iron trade is the recent rapid advance in the price of 80 per cent. ferro-manganese, and to a less extent the advance in spiegel. In the two weeks, from September 19 to October 3, ferro jumped from \$66 to \$90, and for immediate delivery the price still remains \$90. The advance in spiegel (20 per cent.) in the same time was from \$32 to \$40. The advance in spiegel was therefore 25 per cent., and in ferro 36 per cent.

The lowest prices, both of spiegel and ferro, were at the beginning of the year. The advance in the price of spiegel has been from \$28 to \$40, and in ferro from \$54.50 to \$90.

It is needless to suggest that this rapid advance in price is due to the greatly increased demand for steel, which has been far in excess of what was supposed to be possible. This demand has found a small supply, and for immediate delivery prices have jumped. That producers of this metal do not expect these to continue, is evidenced by the fact that the week ferro jumped to \$90 it was offered for January, February and March (1890) delivery at \$78.50 New York, equal to \$81 Pittsburgh. But even \$81 is a high figure for ferro, and it becomes an interesting question whether it will be maintained. This depends upon the supply of manganese ore.

What are the prospects as to the future supply of manganese ores? There is no question that the outlook is not a good one. The production of manganese ores in 1888 was considerably less than in 1887. In 1887 the production of high grade manganese ores in the United States was 34,524 tons. In 1888 it had fallen to 25,500 tons. There was a reduced production in all three of the producing districts of this country, viz: Crimora, Virginia, Cartersville, Georgia, and Batesville, Arkansas. The production of other countries, measured by the imports into Europe, which gives the best, indeed the only available, idea of production, also fell off in 1888 as compared with 1887.

The imports of manganese ores into Europe in 1887 and 1888 was as follows. The details of the imports for 1887 have not been secured, only the totals:

Into	1887—Tons.	1888—Tons.
Great Britain.....	74,906	6,174
France.....	6,174	1,945
Belgium.....	1,945	9,624
Germany.....	9,624	
Total.....	126,615	92,649

The sources of the 92,649 tons imported in 1888 were as follows:

	Tons.
Caucasus (Russia).....	48,653
Chili.....	24,746
Spain.....	2,830
Portugal.....	5,638
Turkey.....	669
Italy.....	385
Greece.....	500
Sweden.....	6,089
Australia.....	1,572
New Zealand.....	787
Canada.....	248
Sundries.....	532

Total.....92,649

All of the ore from the Caucasus contained 53 per cent. to 55 per cent. metallic manganese, but from .15 per cent. to .16 per cent. phosphorus. That from Chili contained 50 per cent. to 54 per cent. and free from phosphorus. The Swedish mineral is somewhat silicious.

Where supplies in addition to these," says the Manufacturer, "are to be obtained it is difficult to say. The world has been searched for manganese deposits for years. It is true that there are many known deposits that may prove of value in the future that have not been worked because of present inaccessibility or high cost of transportation. It is believed that there are a number of such deposits in Virginia, some in Arkansas and in other States. The present prices of manganese ores, which are for a 50 per cent. ore with not more than 8 per cent. of silica and 10 per cent. of phosphorus, 31 cents a unit for the manganese and 10 cents a unit for the iron delivered at Pittsburgh, may stimulate developments and search. It is also possible that at some of the manganese mines in the mountains of Virginia, where there is plenty of charcoal, small furnaces may be erected and ferro made and 'teamed' to the railroads, the haul being a ton of ferro worth \$90 at market instead of a ton of ore worth \$15. We also hear of a discovery of manganese in Asia Minor, near Trebizond, that will yield 10,000 tons this year, but the outlook for a largely increased supply of manganese ore large enough to materially reduce prices is not very good, especially while the present demand for Bessemer and open-hearth steel continues."

THE contract for building two new cruisers for the navy has been awarded to the Columbian Iron Works & Dry Dock Co., of Baltimore, at \$1,225,000. This is but another indication of the Southward trend of industry. To this ship-yard, now able to compete for building iron and steel steamers, the South will soon add the immense plant at Newport News, where \$1,500,000 is being invested in establishing one of the largest ship-yards in America, and that will ere long, we think, be followed by other ship-yards farther South. Charleston has very recently organized a company to build large coasting sail vessels, and soon it will be in order for a Georgia or an Alabama port to establish an iron and steel ship-building yard, because the South is going to make its own steel.

NOT many months ago that able, influential and enterprising newspaper, the Charleston News and Courier, congratulated its readers that there were no iron and coal mines in that State to create such labor troubles as were then prevailing in Pennsylvania (if we remember correctly). The facts presented by our correspondent's letter of the mineral resources of the three zones of the Alpine counties of the Palmetto State, and of the probability of a speedy supply of coke for the furnaces that will be built in their vicinity, ought to and doubtless will induce our brilliant contemporary to congratulate the people of his Commonwealth upon the "manifest destiny" of that richly endowed section. But will not that influential journal also concede that the prosperity that the people of Spartanburg, York, Chester and Union counties are hopefully anticipating would never reach them if, in the changes and chances of American politics, something equivalent to the Mills bill should unfortunately become the law of the land? The MANUFACTURERS' RECORD, in its turn, congratulates the people of York and her sister counties of the three zones, that for the present, at least, no such danger impends. Development can go forward without the shadow of a passing cloud to darken their prospects or cast a chill upon their hopes.

THE MANUFACTURERS' RECORD has several times recently stated that extensive Bessemer iron and steel works, including a furnace, rail mill, &c., would shortly be established in the South, and it is expected that in a few weeks full particulars can be made public. It will suffice for the present to say that the developments which will follow the commencement of this work will prove of untold value to the South. The testimony of the highest authorities places the cost of making Bessemer pig iron at the location selected from ore averaging over 60 per cent. of iron and practically free from phosphorus at only about \$8 a ton. That this means something of a revolution in steel-making it is almost needless to say.

It is reported from Pittsburgh that an agent of Krupp, the German gun-maker, has secured an option on a large tract of land near that city on which he says Krupp will erect extensive iron works. It is even said that he proposes to move his plant from Germany to this country. While this is hardly probable, yet we think it quite possible that he will establish branch works in America. Several weeks ago the MANUFACTURERS' RECORD said that reports were being circulated that Krupp would in some way be interested in the large plant near Baltimore which is being built by the Pennsylvania Steel Co., and that frequent visits had been made back and forth between these works and Krupps, but no confirmation of these rumors can be secured.

A Northern Expert's Figures on Iron-Making.

Col. J. D. Kase, of Danville, Penn., is an authority on iron matters. He is an expert and a man of sound, practical judgment, and is not given to jumping at conclusions. He is a thorough careful investigator, and few men better understand the iron business in all its details. So much as an introduction of Col. Kase to such of the readers of the MANUFACTURERS' RECORD as do not know him. For several years Col. Kase has been carefully investigating the iron-making advantages of the South, and when the MANUFACTURERS' RECORD published Mr. Abram S. Hewitt's statement that it was possible to make pig iron in the South at \$7.50 a ton, Col. Kase wrote us a good-natured letter criticizing the correctness of these figures and the policy of making such claims for this section. The reply was made that this statement was not by the MANUFACTURERS' RECORD, but by Mr. Hewitt, and was given as a matter of news of value to the country at large. Now Col. Kase is beginning to follow pretty closely after Mr. Hewitt's figures, and the estimate which he gives of the possible cost of making iron is worthy of attention, for it is the testimony of another Pennsylvania iron expert on the unequalled advantages of the South. The figures which he gives were furnished to the Iron Trade Review, of Cleveland. The Review says:

From Col. James D. Kase, of Danville, Pa., we have received some fresh and recent facts regarding the estimated cost of manufacturing pig iron in Eastern Tennessee, near Athens. The particular deposit of iron ore referred to lies eight miles east of Athens, on the Nashville & Tellico Railroad and the Knoxville Southern Railroad. It is a red fossiliferous ore, varying from eight to twelve feet in thickness. This ore vein forms the crest of a ridge, and is over 100 feet above water level. It dips eastward at an angle of about 35 degrees, and is entirely free from slate seams, being remarkably uniform in quality. It analyzes, metallic iron, 51.85 per cent.; silica, 7.03 per cent.; phosphorus, 0.764 per cent. Four miles beyond this vein of fossil ore, and one mile from the Knoxville Southern Railroad, is what is claimed to be the largest and most valuable deposit of brown hematite ore found south of the Potomac river. It is claimed to average 80 feet in depth. The following analyses were made from general average samples taken from five different openings.

	Metallic Iron.	Silica.	Phosphorus.
No. 1.....	56.9	7.87	0.220
No. 2.....	58.8	3.94	0.704
No. 3.....	51.1	13.95	0.151
No. 4.....	53.2	11.40	0.438
No. 5.....	51.1	14.20	0.192
Average.....	54.25	10.27	0.341

Col. Kase makes the following estimate as to cost of producing pig iron at Athens with the use of Cumberland Gap coke, which is now being turned out within 95 miles of that city:

2½ tons brown hematite ore to make 1 ton iron @ .85.....	\$1.81
1½ tons Cumberland Gap coke @ \$2.50.....	3.34
¾ ton limestone @ .50.....	.38
Labor (Chattanooga estimates).....	1.25
Office expenses, management, etc.....	.25
Repairs, etc.....	.75
Total.....	\$7.78

On the basis of the above figures, and the present cost of carriage, it is claimed

that pig iron can be made at Athens and laid down in New York at a cost, over all expense, of \$12.03 per ton, made up as follows: Cost of production \$7.78, freight \$3.75, and commissions 50 cents. The present market price of iron is \$16.50 per ton. The profits, therefore, would not be less than \$4.47 per ton, or on the day's make of iron at the furnace \$4.47, which, on a conservative estimate, would give the furnace company a profit of over \$130,000 per annum. We have no means of verifying the above figures, but present them as given, without comment.

THE public announcement that Mr. Geo. Vanderbilt, who during the last ten or twelve months has secured over 4,000 acres of land near Asheville, N. C., will build a magnificent residence at a reported cost of about \$1,000,000, and lay out the entire tract of land as a beautiful private park under the direction of the ablest landscape engineers, will be a very great advertisement of all of Western Carolina. It is well known that the beauty of its scenery and its unequalled climate are the attractions that have drawn Mr. Vanderbilt to that section, and thousands of other rich people will be induced by his example to investigate for themselves, and thus to learn that Western Carolina is one of the most attractive regions in America, if not in the world. It is a country of magnificent scenery; its climate is the delight of every one who has ever been there, and probably a more invigorating, bracing, balmy, health-giving air than that of Western Carolina will never be found; its mountain rivers and springs furnish an abundant supply of the purest water; it has Bessemer ore enough, in close proximity to coke, to furnish the ores for furnaces of half a dozen Pittsburghs; it has vast forests of the finest hardwoods; it has gold and copper and mica, precious stones, including even diamonds, of which a number have been found, and other minerals in great abundance; it has rich agricultural valleys and fine mountain grazing lands; it has, so the geologists tell us, in "Grandfather Mountain" the oldest mountain in the world, and it has a greater variety of timber and of wild flowers than any other section of equal area in the United States. These are some of the attractions of Western Carolina—"The Land of the Sky"—and the time will come when that magnificent country will be the center of vast industrial activities and the home of thousands of the rich who will seek health and pleasure in such a country.

THE Textile Record for October, referring to the rapid increase of cotton mills in the South, thinks there is no reason to fear that the business of weaving cotton fabrics will be overdone, because the population of this country is growing faster than is that industry. It thinks that the next census will show a gain of 15,000,000 inhabitants since 1880, which is better for our manufacturers

than though they had the exclusive control of the cotton goods trade of Mexico, whose actual population is about the same as our estimated increase. It says: "It is the amazing and absolutely unparalleled development of the consuming capacity of our own markets that makes it almost impossible for supply to overtake demand." To this we add, that to this fact is to be ascribed the deep-seated dislike European manufacturers entertain to our protection policy, and the earnest efforts put forth by their resident agents for its undoing.

ATTENTION has been directed to the banana stalk and leaf as sources of fibre supply. It is said that fibres of the stalk of a silky fineness can be obtained of a length varying from five to nine feet. We remember seeing masses of this fibre in the Florida exhibit at the Atlanta Cotton Exposition in 1881. The cultivation of the banana is increasing in that State, and its consequent opportunity for producing a long fibre must be in the same ratio. If the banana fibre has all the qualities its advocates ascribe to it, it would be well for men engaged in textile industries, in twine and in small rope manufactures to get samples of it and submit it to such tests as will determine its practical value. Should it prove to be all that is claimed for it, then our Central American and West Indian neighbors, as well as our Florida friends, would have a new article added to their already valuable list of native products.

The Law of Gravity in the Manufacturing Business.

The press of the entire country is beginning to appreciate the truth of what the MANUFACTURERS' RECORD has long been preaching—and that is that Southward the course of industry is rapidly tending. In a late issue The World's Progress says:

It is now recognized in New England that there is really such a law, and that it has a tremendous force and never fails to be executed. Mechanics and capitalists are equally concerned to know what is the scope and meaning of this law, and then to study carefully its relation practically to their business as craftsmen or as employers or masters. In New England it is rapidly beginning to be felt that the manufacture of cotton goods must eventually be carried on near the place of production, and hence a general rule is being formulated that in the near future raw materials must be manufactured near the place of production if any money is to be made in the operation. Already an edge tool manufacturing company in Maine has begun the erection of a branch factory in the metal region of the South, and this is by no manner of means an isolated instance. Year by year the competition in business is becoming more and more serious, and common prudence seems to demand that a very thorough study of the situation should be made.

If you are not already a subscriber to the MANUFACTURERS' RECORD, send us \$4 and you will receive it regularly for one year or six months for \$2.00.

Bessemer Ores in Carolina.

[Spec. corresp'dence MANUFACTURERS' RECORD.]
YORKVILLE, S. C., October 26, 1889.

So much has been published respecting the gold mines of the Piedmont counties of North and South Carolina, that there is a prevalent belief that ores of that precious metal are the only ones found in sufficient quantities to warrant investigation and development. This is very far from the truth. In that same Piedmont region are vast bodies of iron ores, beginning at Guilford county, in North Carolina, and underlying a wider area further to the south and southwest, until they disappear in Spartanburg county in this State. With these are other minerals of intrinsic value in quantities great enough to warrant their development. Some of these iron properties were worked in early colonial days, others later on, and the quality of the iron made from them was equal to the best of any other section.

Mr. Joseph G. McNulty, late of New York, an experienced mining engineer, who has been prospecting this region for several years, has kindly furnished me for publication the following general facts respecting the mineral wealth of this iron district of South Carolina:

"In this State are three mineral zones, extending from the North Carolina line through a territory that comprises York and Spartanburg counties, with portions of Union and Chester. Within these zones are magnetic, red and brown hematites, specular and (so called) bog ores.

In the eastern or Catawba river zone, the most important point is Nanny mountain, which is ten miles northeast of Yorkville and a little less than five miles from the three C's railroad. Here are found both brown and red hematites. The Hill mine, which was one of the earliest, if not the first, opened in the South, was operated for years prior to the American Revolution, and because it furnished many munitions to the American army its furnace was destroyed by the British in 1780. This ore-bed has been recently explored by shafts and open cuts, and for 8,000 feet ore has been found in paying quantities. This iron is of exceedingly fine quality, fully 50 per cent. of the ore coming within the Bessemer limit. One favorable feature of this bank is that because of its elevation and dip it can be so tunneled that the ores can be brought out by gravity.

The second or Henry's Knob zone occurs in a Huronian slate formation which lies within three miles of the Chester & Lenoir Railroad, and about ten miles north of Yorkville. The ores, which are highly magnetic, occur in well-defined deposits and are all suitable for the Bessemer process. This zone is traceable into Gaston county, North Carolina. Just to the west, and parallel with this belt, is a formation quite similar to that of Nanny mountain that abounds with high-grade, porous, hematite ore.

The third or western zone, which lies between Broad river and the line of the three C's railroad, and that will soon be crossed by its Augusta branch, contains vast bodies of magnetic ores in a geological formation of slates, in which the ores occur in lenticular masses. These are of very fine quality. Much of this zone remains unexplored. There is plenty of limestone in close proximity. Ores were formerly worked in furnaces on both sides of Broad river, where also were rolling mills and a nail factory.

In the northern parts of Chester and Union counties recent explorations have exposed extensive bodies of magnetic ores. In the so-called 'black jack' country of the Broad river bog ores occur in large quantities. Taking Yorkville as a center, it may be said that for thirty miles in all directions are extensive bodies of high-grade ores that may be profitably worked.

The geological features and occurrences of these ores are identical with those on the other side of the State line, except that on an east and west line through Yorkville, from the Catawba river to the Broad, there is a greater amount of workable ores, both magnetic and hematite, than exists in the adjacent counties of North Carolina."

Asked about other minerals within these three zones, Mr. McNulty spoke of the Mery and Brattin copper mines, of large deposits of copper and iron pyrites, of barytes, of corundum, all of which are here in paying quantities and await the coming of capital and enterprise for their development.

Six miles north of Yorkville is a quarry of true gray granite, about two miles away from the Chester & Lenoir Railroad. From this have been taken shafts 32 feet long, 4 feet wide, and 2 feet 7 inches thick. A company is now organizing for the development of this property, in which local capital will take an active part. They expect to have money enough to operate on a scale commensurate with the extent of the property and the excellence of its product.

A stone new to architects and geologists has recently been found within a mile of this place and near the junction of two railroads which has been called (inappropriately, I think,) Carolina bluestone. It has a peculiar greenish-blue color, is very hard and of unusual specific gravity, and it receives a very pretty finish. Recently it was tested at the United States navy-yard at Washington, and withstood a pressure of 22,000 pounds to the inch. There is a large deposit of this stone here and another in the eastern section of the county, and besides these no other is known.

The general statements about the iron territory given above may be depended upon as eminently conservative. They show that when the Charleston, Cincinnati & Chicago Railroad shall be able a year hence to transport coke from the Virginia coal fields through which it will run to this section, then, somewhere on its line between the Broad and Catawba rivers, there will arise another great center of iron and other industries.

Liberty, Virginia.

In this issue of the MANUFACTURERS' RECORD are set forth some special claims of Liberty, Va., to the favorable consideration of prospectors and investors. Liberty is an admirable location for manufacturing enterprises, of which it already possesses a number in successful operation. Its close proximity to the ore beds and coal fields of Southwest Virginia, its easy access to the rich mineral deposits of Bedford county, cheap and abundant labor and fuel, ample transportation facilities and sanitary advantages, combine to make Liberty all that could be desired as a manufacturing center. The community is growing rapidly, and the people display that spirit of progress which is essential to successful enterprise. Every reasonable encouragement in the shape of concessions will be offered to parties locating industrial "plants," and the fullest specific information will be furnished upon application.

Perhaps, the most important consideration in the view of likely investors in Southern communities is the educational facilities provided at any given locality. In this respect Liberty challenges the most rigid criticism. The town is already supplied with a number of excellent public and private schools, but with the present scholastic year there was opened the splendid Randolph-Macon Academy for the thorough training of boys—mental, moral and physical. The school, which has been erected at a heavy cost, will be under the management of Prof. W. W. Smith, L.L. D., president of

Randolph-Macon College, at Ashland, Va., and is, perhaps, unexcelled anywhere within the limits of the Southern States. Two female colleges of elegant and costly construction will also be erected during the coming year, and will likely be opened in September, 1890. These ample educational facilities must give Liberty strong claims to consideration in comparison with other less fortunate communities. One can scarcely exaggerate the advantages possessed by Liberty and its environs, and investors contemplating to locate in the South would do well to examine the merits of that enterprising and public-spirited community. For full information address J. Lawrence Campbell, secretary of the Liberty Improvement Co., or R. Kenna Campbell, manager Longwood Park, Liberty, Va.

ACTIVITY IN IRON.

Big Profits in Well-Managed Furnaces.

[Spec. correspond'ce MANUFACTURERS' RECORD.]

The iron market is steady at \$14 for No. 1. There is no disposition on the part of Southern furnaces to press prices higher. The recent advance cabled from England, 2s. at Middlesbrough, has already been discounted here. The iron trade in the South is in a very healthy condition in all branches. The range of the market during the past quarter has been as low as \$11.50 for No. 1. It can be readily seen that when furnaces could make some money at the lower figure, the present prices are highly satisfactory. There are no large offerings, and trade is buying to cover the legitimate demands of an exceptionally good season. Some furnaces are storing their output, and the certificates are available to pretty close up to their full value. It is to the interest of the Southern furnaces to hold the market steady at about present prices. It is likely that the stored product of Southern furnaces would be thrown on the market to break any sudden advance. The reasons for this may be stated briefly. Any further advance would bring Northern furnaces into blast that are now idle. Even a small margin of profit to some of these idle furnaces would tempt them to re-enter the field; this, with the new Southern furnaces already under construction, would affect the market appreciably. Then the condition of the labor of Southern furnaces is at present mutually satisfactory, and if there should be any decided advance this might be disturbed.

I have had exceptional opportunities for studying the question of iron-making during the past week. I have the opinion of three successful furnace superintendents as to the cost of production. There is one important point that is not taken into consideration by many persons who seek to understand the low cost of iron-making in the South. Owing to the great weight of all the materials that enter into the furnace, the matter of handling these is quite an item. Now, every newly constructed furnace it is reasonable to suppose will profit by the experience of others, availing of all the best designs in every detail of appointment and construction. All the Southern furnaces are, with a few exceptions, new, and are built on the best plans known at the time of construction. Thus the furnace that can supply the raw material from the ore-beds and mines to the stock-house by gravity has an advantage that will count in the cost of its product. A gentleman conversant with the subject tells me of an Alabama furnace that has been in operation a little over one year that has paid a handsome dividend and enough for its owners in addition to erect another furnace. There are some furnaces in the Birmingham district, I am most reliably informed, making iron as low as \$8. One ex-superintendent told me that the

furnace he was with made iron for 6 months as low in cost as \$7.60. Another superintendent informs me his furnace had a showing for 12 months slightly under \$8. The parties I quote I have known for several years, and their statements are certainly correct and reliable.

I have just had an interview with Col. S. B. Lowe, of Lowe & Tucker, who supply near one hundred foundries and machine shops with pig iron. He has just returned from a flying business trip to Atlanta, Macon, Savannah, Charleston and Augusta. He is most enthusiastic on the general condition of trade, but especially of the iron industry. He reports all the foundries and machine shops as doing a rushing business, with full orders at profitable prices. He tells me that never in his experience has he seen such a buoyant, confident feeling in all lines of trade. Speaking of manufacturing, he said it was only within the past four or five years that Southern men of means, and particularly professional men, had begun to put their money into manufacturing enterprises. Even the clerks are becoming stockholders in healthy enterprises. He said that while the North had invested much money in the South, yet to Southern men in a great measure is due the present development, more particularly as to iron-making. This, in a large measure, has been a matter of reproduction—one furnace earning the money to build another. He has no hesitancy in saying that any well-placed and properly conducted Southern furnace can earn from \$75,000 to \$125,000 clear profit per year.

PERCY CLARK.

Active Times in Denison.

A dispatch from Denison, Texas, referring to the visit of the large excursion of New England capitalists last week, says: "This has been a gala day for Denison. Over four hundred thousand dollars' worth of real estate changed hands and a movement was made looking toward the establishment of a rule factory and carriage factory and a mammoth steel plant. The mayor and a committee from New Birmingham came in this morning to interview the Denison people and New England friends with reference to furnishing ore for the Denison steel works. They brought with them some of the finest samples of ore that have ever been found in Texas, to show to the capitalists. They claim to have inexhaustive beds of this splendid ore. But as they have not the coal they are unable to make use of it successfully. This being the case, they propose to give Denison such inducements as will enable them to put up a plant and make it successful beyond a doubt. A meeting was held this afternoon to hear the proposition of the gentlemen and take such action as was deemed advisable. One thing seems certain, and that is that a steel mill is an enterprise for Denison in the near future. The Eastern friends believe it will pay and say they have money to invest in it. Other enterprises are on the tapis and the New Englanders will go back home and make arrangements looking forward to the advancement of other industrial enterprises. The Bostonians will leave for the East to-night, and the 21st of November another and a larger excursion will arrive in Denison, at which time some important features of the South's industrial boom will be made public. One real estate office sold \$85,000 worth of real estate inside of four hours, including \$50,000 on the East Side. Another sold \$40,000 in the same time. Another real estate office reports sales aggregating \$20,000, another \$10,000, another \$15,000. Mr. S. H. Gorham sold for \$6,000 property on Woodlawn boulevard which cost him only \$3,500 last spring. Three gentlemen who came here with the New England excursion are negotiating a \$16,000 deal and have decided to remain here a few days longer. The beauty of this active movement in real property here is that it is based on solid reasons and it will continue active. Denison's growth has really just begun."

Buena Vista (Va.) Iron Ores.

LEXINGTON, VA., Oct. 26, 1889.

Editor Manufacturers' Record:

In my career as field geologist I have been compelled to condemn mineral properties so much more frequently than I could recommend them, that I deem myself happy in being able to give an emphatic testimony in favor of the Buena Vista (Va.) mineral lands. I had long known these lands by reputation, and I had seen favorable testimonies from highly competent men, such as Prof. J. L. Campbell, Mr. Alex. McCreath and Mr. J. H. Bramwell, but I knew that these gentlemen had not been able to give to the field the sort of prolonged and detailed examination which I proposed to give.

I have now devoted six months to an independent study of the property both in and out of the field. The geological structure and surface indications were of course studied carefully; also the history of the mining and smelting which were done here on a small scale for perhaps a century, but the most convincing work has been done and is now doing with pick and shovel. Although this has been one of the very few properties south of the Potomac where the smelting of iron ores was carried on profitably under the old state of affairs, yet the total of the mining had made so little impression on the ore beds as to leave the field in a manner unexplored, and to demand much additional digging.

The results of this work have been surprising, even to the former owners, in respect to the number, size and quality of the ore deposits.

I have mapped 13 different beds running in lines nearly parallel to each other and to the crest of the Blue Ridge, along whose western flanks and foot-hills the ore lines run. These beds differ from each other in size, length and quality. They lie in the Potsdam sandstones and slates, and in the overlying Canadian limestones; the largest and best of them in the upper Potsdam slates. Here five large beds have been proved to exist, their outcrops having been uncovered at different points for the distance of from half a mile to a mile and a-quarter, and show a thickness varying from 10 feet to over 80 feet of solid brown hematite, averaging over 20 feet. Other promising beds remain to be opened. These beds give indications of a continuity much more perfect than is usual with the Potsdam ore beds, and they also present all the indications of stratification. The theories usually put forth as to the origin of the Potsdam ores do not fit the facts as found at Buena Vista. These facts seem to compel us to believe that the ores were formed originally in sheets on the sea bottom, either by deposition from water or by segregation from the mud, and that this process continued under the influence of acidulated rain water after the elevation of the strata.

The inter-sandstone ore beds seem to be regularly stratified, and the ore beds in the State lie in sheets showing their edges at the surface, and descending deeply into the earth at a high angle of dip, just as do the adjacent rock strata. Probably these upper beds lie in troughs, and hence reduplicate themselves, but the bottom of these troughs has never been reached in a single instance, although shafts have followed the beds from one to two hundred feet downward. All this promises large and regular deposits underground.

The length of these great beds has not been, and cannot very soon be, determined. The Buena Vista tract runs for six miles along the Blue Ridge mountain, and includes the whole ore belt. Some of the ore beds undoubtedly extend the entire distance. Others may or may not. This is a question which will be answered gradually as the work of development goes on.

But enough has been proved to justify

the erection not only of the one large furnace now under contract, but another, and perhaps another still, to be supplied exclusively from Buena Vista ores.

These ores are chiefly brown hematite of excellent quality. The average of all the analyses hitherto made is 51 per cent. metallic iron. The former owners got an average of 53 per cent. metallic iron for their last period of 10 years. Of course they selected their ores carefully. But a furnace here may expect 50 per cent. iron with ordinary mining. This is much better than is common anywhere, and at least 5 per cent. better than is gotten from the same line of ores in the Lehigh valley.

The iron made from Buena Vista ores has always brought the top of the market for foundry No. 1, and has sometimes been graded car wheel. An old lot of pig held over by the former owners has just been sold for \$19.50 on the ground, which is high now even for charcoal iron.

There is still a vast forest available for charcoal, but the first new furnace will use Pocahontas or New River coke, unless the Baltimore & Ohio Railroad chooses to bring into competition the Connellsville coke. The cost of coke will not exceed \$3 per ton.

The ores lie in the hills, where there are vast quantities easily reached above water level, and may be more cheaply mined than anywhere else that I know of on this line. The total cost of making iron here has been estimated lately by some experienced Pennsylvania men at \$9.73 per ton.

It is certain that the advantages here are not to be surpassed anywhere. It is expected that foundries and rolling mills will be built at Buena Vista for working up much of the pig iron, but it can be put into New York at \$2.50 freight. As coke foundry iron No. 1 is rarely below \$18 in New York, it is easy to see that iron-making at Buena Vista is likely to be very profitable.

Additional statements concerning the resources of Buena Vista will be made in a future article.

WM. H. RUFFNER,

NOTE.—Buena Vista is 150 miles south of Harper's Ferry and 7 miles east of Lexington, at the place where the Shenandoah Valley and Richmond & Alleghany Railroads parallel each other closely for nearly two miles along the bank of North river of the James. The B. & O. is within 7 miles.

W. H. R.

The Okra Plant.

YORKTOWN, TEXAS, Oct. 18, 1889.

Editor *Manufacturers' Record*:

My letter of September 30th was not intended for publication—only for your own information—or I would have given more explicit explanation about the culture of this remarkable plant, which doubtless in a near future will cut an important figure in the agricultural economy of this country, not only on account of the valuable fibre abundantly contained in its bark, but chiefly because it will become the forerunner of an immense culture of other valuable cast-fibre plants as ramie, jute, phormium, tenax, &c., and of leaf-fibre plants as sansevieria, yucca, tyave, bromelia ananas, &c.

Okra, as stated, will grow in any corner of the United States, it requiring but 80 or 90 days of warm weather. For fibre-producing purposes the seeds should be sown in any rich soil in furrows, six inches apart, in order to prevent the stalks from branching out; in planting them close together, they will, in struggling for light and air, grow tall as an arrow; the leaves and blossoms, by lack of these elementary necessities, will drop early in the season, being thus prevented from forming thick knots, which, if allowed to grow, would produce holes in the bark, and consequently cause an interruption in the length of the filaments. For the Northern States the sowing should take place in beginning or first half of May; in

the South the beginning of April would be the best time for this manipulation. Although okra will not absolutely require irrigation during the dry season, yet some watering from time to time, if the weather is extremely hot, would largely contribute to advance the growth of the plant, which can be pushed to a height of from seven to eight feet when the cultivator will take my advice to dissolve some natural or artificial fertilizer in the water with which to irrigate.

Time of maturity of the stalk is indicated by its assuming of a pink color. When at that time the stems in the South are cut two inches from the ground, the stumps will immediately send up new sprouts, mostly two of them, which will come to full maturity towards end of September, thus early enough to have the bark peeled off by a decorticating machine, degummed in any pool or tank containing stagnant water. Before steeping the ribbons they should be tied loosely in bundles of from sixty to eighty in number. After five or six days the fleshy matter of the bark, which technically is called "pectose," is dissolved by fermentation, when the fibres are submitted to a perfect washing; by a subsequent drying in the sun or some suitable place in the barn, the work is terminated, and the fibres are ready for packing and shipping.

Their market price in the near future will be, I suppose, from eight to ten cents per pound, considering the superior qualities in strength, cleanliness, gloss, and principally in resistance against the influence of humidity.

In the North the second crop will in all probability not come to maturity for fibre, but I think that pods for culinary can be raised from the young sprouts in endless profusion.

Farmers intending to try the culture of okra will do well to provide in time for their wants of seeds, as they will in all probability get scarce.

Editors, I have mailed you to-day samples of okra fibres; of jute prepared to have the natural strength and gloss preserved; also of ramie ribbons of the third-crop of this year.

Will you kindly submit these samples to the examination and evaluation of impartial experts and publish their judgment, together with that about the accompanying sample of Indian jute.

Both agriculture and manufacture would greatly benefit of such communications, and perhaps accelerate the grand triumphal entrance of these valuable staples into our glorious country.

Although I had resolved not to write any more publicly about the future cast-fibre plants in the United States, considering the inconceivable indifference of the capital towards these promising industries, without the assistance of which agriculture in general cannot afford to introduce them on so large a scale as wanted for providing for the wants of our indigenous manufacture, the needed machinery for decorticating and degumming being too expensive, yet I will yield to your request and arguments, and for some of your next issues I shall prepare essays with attendant tables of the large benefits to be derived from the cultivation of ramie and jute.

The Ramie Co. of America, at Philadelphia, Pa., which is presided over by Mr. Burnet Landreth, of the famous seed house of David Landreth & Sons, at Bristol, Pa., is rapidly moving on the right track, which is best illustrated by their recent invitation tendered to the public to assist the decorticating of ramie grown at their premises at Bloomsdale farm, near Bristol, the degumming of the bark and the bleaching of the fibres.

FELIX FREMEREY.

IF you are thinking of enlarging your mill, factory or mine, or of purchasing machinery of any kind, send us a postal card giving character of machinery desired.

What Protection Has Done.

A year or so ago the *MANUFACTURERS' RECORD* published a letter by Mr. Wm. R. Moore, of Memphis, Tenn., showing that the Southern farmer had benefited through protection, as he purchases his goods at a much lower price than in 1860, and sells his cotton at a higher price than then. Mr. Moore has now written to the *Memphis Eagle* a letter in reply to a free-trade speech by Hon. Josiah Patterson. In this letter he says:

"The Hon. Josiah Patterson and myself are each native Southerners, each born in Northern Alabama, and each belonging, I believe, to the purely Southern type of American citizenship.

I beg to premise, also, that I am both a personal friend and admirer of Col. Patterson. I recognize him as one of the ablest and fairest of his political party, and, per consequence, one of the most influential in its counsels. Now while he and I are, so far, in common, identified, our views upon leading political and material interests have been and are as widely apart as are the poles.

In the able speech recently delivered by him he said:

"Prior to the war the people of the South were peculiarly agricultural. They had but few manufactories, and these almost without exception were put to the torch. After the war the entire manufactories of the country were substantially confined to the limits of the Northern States. Under the manipulation of the statesmen of that section, the entire accumulated wealth of the country was practically relieved from the burdens of taxation, which were placed on the imported necessities of life, thereby increasing the price of manufactured products by the amount of the taxes, so that the Southern people not only paid their proportion of the taxes which went into the treasury of the Government, but incidentally paid enormous sums into the pockets of Northern manufacturers. These are some of the obstacles which have stood in the way of Southern progress."

You will observe that he truly says 'we had few manufactories' in the South. Now, why was this true? First, I answer, because the South, being agricultural purely, and owning in fee simple its own labor, it naturally advocated any policy which tended to strengthen and prolong that system, peculiar only to these Southern States. Hence, under a then Democratic tariff of an average of about 19 per cent.—approximating to free trade, it was not then possible to inaugurate any general system of manufactures within the slave States.

The country was under pro-slavery domination, and the opposing protectionist theory, as then so ably led by Henry Clay, had not yet taken, as now, ineradicable root. But the great war came on—no matter through whom nor how—and the entire situation underwent a radical change. The National Congress, after the secession of various States, became possessed of a strong protectionist majority, and measures were speedily inaugurated which engrafted that specific policy upon the whole country.

What have been the practical results? Under that system the huge public war debt of nearly 3,000,000,000 has been cut down to now only about 1,100,000,000. Manufactories, under its fostering care, now send up their smoke and steam from the myriad mines and waterfalls of every Southern State. Farmers are getting relatively better prices for their products, and buying their supplies cheaper than ever before, and the South, as will be, I think, admitted by Col. Patterson, was never so prosperous as it is to-day.

The average rate of wages in the United States from 1850 to 1880, as shown by official records, has been increased 42 per cent. Ah, but says the free trader, 'this is owing to the wonderful modern inventions,

the development of new machinery, railways and so on,' and so I partly admit. But what gave origin and impetus to these wonderful inventions, etc.? Now just here is where this wise protection policy shows its splendid results. Does Col. Patterson or any other free trader presume that the poor South could ever have built up its now magnificent system of manufactories in competition with a rich North without the aid of the present 47 per cent. tariff? What has been the practical effect upon the people of the South of raising the then 19 per cent. Democratic tariff to the now Republican tariff of 47 per cent? Every farmer and business man in the South knows that his chief staple, cotton, is worth more to-day than before the war; and yet the manufactured products of cotton needed by the people can be bought now for nearly one-half the price then prevailing. Would or could this have been the case if we now had here at home no manufactories? Competition has brought all this about, and the tariff has brought the competition. It has created a greater demand for the farmer's products, and augmented more than five hundred fold the competition of those who furnish his supplies, thus increasing prices of what the farmer sells, while lessening nearly one-half the prices of what he has to buy.

One stubborn fact is worth a thousand yielding theories. Below I append an exact copy of goods and prices furnished by my old firm in 1860. We were then living under a low tariff, averaging 19 per cent. Now we are living under a high tariff, averaging 47 per cent. The prices then and now are accurately set forth in this invoice, and will be verified by every old merchant throughout this region. Both the prices of the goods and the cotton taken in exchange by us will carry their own eloquence. Read them carefully, as below, viz:

[Copy.] MEMPHIS, May 9, 1860.

WM. WHITE, Hernando, Miss.

Bought of SHEPHERD & MOORE,

329 Main Street.

Prices then.		Prices now.	
4 pcs. 3/4 brown shirting....	8 cts.	5 cts.	
3 " 4/4 brown shirting....	8 1/2 "	6 1/2 "	
3 " brown drilling....	9 1/2 "	6 1/2 "	
2 " black and white prints....	10 "	5 1/2 "	
1 pc. furniture prints....	10 "	8 "	
1 pc. red oil prints....	15 "	6 1/2 "	
No. 600 1 bag cotton yarn....	13 "	7 "	
No. 400 1 bag cotton yarn....	15 "	9 "	
1 pc. 10-4 sheeting....	35 "	18 1/2 "	
1 pc. blue and white plaids....	12 1/2 "	5 "	
2 pcs. plain prints....	10 "	5 1/2 "	

For the above bill we then took in exchange middling cotton at 8 1/2 cents per pound. Readers can carefully compare and then make their own comments. Under that low tariff we bought all our plaids and similar things of Northern mills. Under the present high tariff we buy every yard of our plaids, jeans, sheetings, osnaburgs, drills and similar goods in the South and from Southern mills. The same rates of reductions apply to almost everything used by the farmers of this country now.

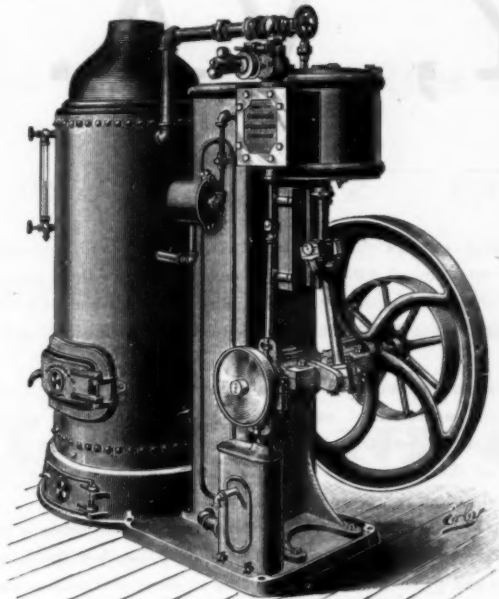
Col. Patterson and other free traders love to laud Andrew Jackson as their patron saint in politics. Why do they not tell the people that in 1824 'Old Hickory' wrote L. H. Colman, of Virginia, as follows:

" * * * Draw from agriculture the superabundant labor, employ it in mechanism and manufactures, thereby creating a home market for your breadstuffs and distributing labor to a most profitable account, and benefit to the country will result. Take from agriculture in the United States 600,000 men, women and children and you at once give a home market for more breadstuffs than all Europe now furnishes us. In short, sir, we have been too long subject to the policy of these British merchants. It is true we should become a little more Americanized, and instead of feeding the paupers and laborers of Europe, feed our own, or else in a short time, by continuing our present policy, we shall be paupers ourselves."

Subscribe to the *MANUFACTURERS' RECORD*.

Willard Condensing Engine.

The extensive sale of gas engines and hot air engines, notwithstanding the high cost of the engines, and of gas, reveals the very general demand for an engine of small power, say 2 to 4 horse-power, for the use of small industries, which shall be perfectly safe, and the manufacturers of the Willard condensing engine (of which we give an illustration), who have been en-



WILLARD CONDENSING ENGINE.

gaged in the manufacture of small engines of various types for the past ten years, believe that, in this new engine, which they have now put upon the market for the first time, they offer a motor which possesses all the advantages of other motors of this class, and is free from the structural faults that exist in some of the other machines. The manufacturers claim that the cost of fuel will not exceed one cent per horse-power per hour; that it requires no watching; does not increase the rate of insurance, can be safely managed by a person having no knowledge of engines, and that it is absolutely safe under every and all circumstances, and cannot be exploded because there can be no steam pressure whatever.

The manufacturers, in putting this engine upon the market, desire to impress upon the public the fact that it is not a hot air engine or a kerosene oil engine or a gas engine, but is a condensing engine using a small quantity of steam at less than one pound pressure, burning wood or coal, and is perfectly simple and reliable, making no noise or objectionable smell.

A full descriptive circular with illustrations and prices can be obtained by addressing Chas. P. Willard & Co., 236 Randolph street, Chicago.

Steam Brick-Making Machinery.

The thoughtful, progressive brick-maker of to-day does not question the value of steam brick machinery over hand, or the crude ways of making brick that have been in use in the past.

Thousands of dollars are expended every year by the brick-makers, by still adhering to their own way of making brick, and by the purchase of machinery that is not adapted to their wants, that is practically wasted; and it is only the brick-maker who is able to discriminate clearly between the successful brick machines of the present time and their counterfeit presentment, who is able to make a success of the brick business, and with the sharp competition that you have in this day of mechanical excellence you must have the best that

you can obtain. "You cannot afford to buy the counterfeit at any cost."

It is to aid in distinguishing the genuine that we publish the following detailed description of the machines manufactured by P. L. Sword & Son, of Cleveland, Ohio.

By a glance at the engraving the reader will notice a marked change from the old style, or of 1877. It has always been the aim of the manufacturers to keep their machines up with the times, and by a con-

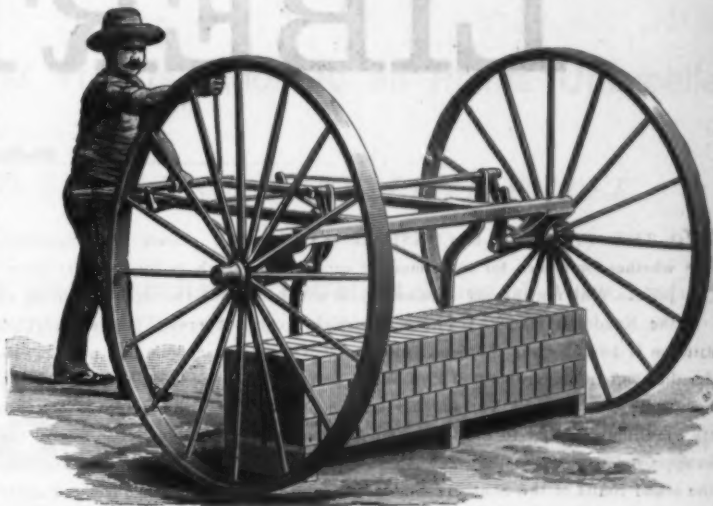
parts that are possible are chilled. All parts of the machines are made to a standard gauge, so that every piece may be duplicated.

In the clay cylinder radical changes have been made, and the diameter increased about one-quarter and made longer, and the opening where the clay is fed into the machine is now nearly twice the size of the old style, which, with the overhanging bridge tree removed, not only removes the

adhere to them, and they will last a great deal longer.

The Sword machines have a self-oiler for oiling the moulds, which saves the labor of one hand, uses less oil, and does the work better; they are now built into the bed-plate, in place of being fastened with a yoke, as before.

The increasing popularity of brick as a pavement has opened a new field for the brick-maker. The Sword machines are



THE SWORD TRUCK AND PORTABLE HAKE.

great strain, but also removes the top heaviness.

In tempering some clays it is found that they would not feed readily; this has been overcome by running the grinder shaft the reverse way or directly against the moulds; this insures a better feed with less power.

The grinder knives are now made longer, and the shape of the turtle has been improved.

In working some clays, or where the first cut-off knife has too much of a load on it, brick-makers were bothered with the brick being thicker on one side, or wedge-shaped;

especially adapted for this class of work; the temper that they work the clay and the way that they put the material together, produce a brick that will stand the frost and wear.

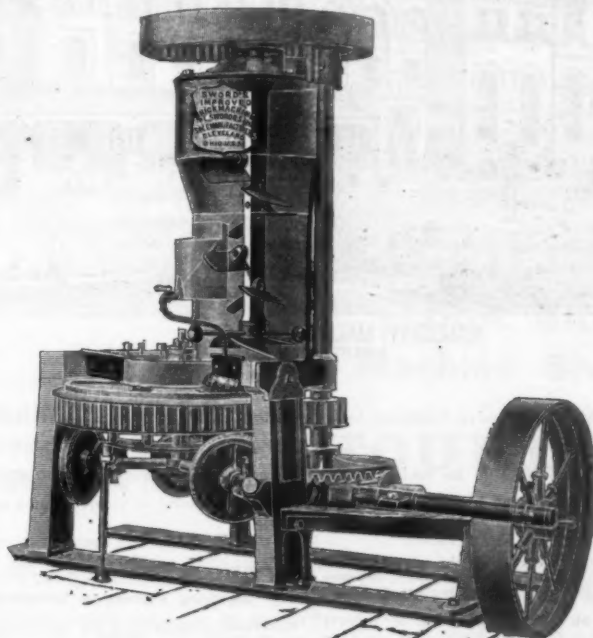
It is claimed to be the only machine that is adapted to the making of paving brick from the harder materials, such as fire-clays, shale rock, slag, etc., also to the making of the patent paving brick shapes from the compounded materials. For this class of work there has been added a heavy pug mill, which, in connection with the machine, insures a perfect mixing of the materials.

These machines are adapted to the manufacture of all kinds and shapes of fire-brick. Their capacity is from 25,000 to 40,000 per day of ten hours.

The Sword truck and portable hake is one of the greatest labor-savers ever placed in a brick-yard. The portable hake is placed at the machine to be loaded with the green brick; when loaded, one man with the truck removes the hake to the yard to dry; as soon as the brick are dry enough to set, one man with a truck removes the loaded hake from the yard to the kiln, the two men with the truck doing the work of nine men, and the brick going to the kiln in better shape than any other possible way, as the brick are not handled but the once, when they are loaded at the machine, until they are set in the kiln, so that with the truck one not only saves from 25 to 30 cents per thousand, but the brick are not marred by handling.

The trucks are not only adapted to handling dry clay and soft mud brick but all kinds of loads, paving brick and blocks, fire-clay products, stone paving blocks, etc.

For further information in regard to the Sword brick machines and supplies address P. L. Sword & Son, 2021 Euclid avenue, Cleveland, Ohio.



THE SWORD IMPROVED BRICK MACHINE.

becomes self-contained, and the risk of breakage is reduced to the minimum; it makes it impossible to get the bevel gear and pinion out of line, which increases their wear. The manufacturers have increased the power of the driving gear of both the grinder and the mould wheel; the bearings have been lengthened; steel shafts are used for all driving shafts. All gears and parts exposed to wear are made from special mixture of iron and steel, and all

this has been entirely obviated by adding a double cut-off knife, which not only makes the brick square on the struck side, but does not pitch the brick.

The shape of the press-plate has been changed and improved so that the brick gets a more direct press than before.

The first cut-off knives are all solid cast steel, chilled and then polished; this, it is claimed, makes them far superior to steel-plated cut-off knives, and the clay does not

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

SOME SPECIAL CLAIMS

POSSESSED BY

LIBERTY, V.A.

TO THE FAVORABLE CONSIDERATION of all classes of prospectors, whether for homes, for investment of capital, for health, or for business enterprise. With the ensuing scholastic year will be opened the superb building of the Randolph Macon Academy, of which a cut is herewith presented. This institution is built for the thorough culture of boys—mental, moral and physical—is under the efficient management of Prof. W. W. Smith, LL.D., president of the Randolph Macon College at Ashland, Va., and has been constructed regardless of cost, to secure every condition essential to the successful attainment of its objects according to the most approved modern standards. Such another educational institution does not exist in the broad limits of the Southern States. In addition to this two handsome Female Academies, constructed upon the same intelligent, liberal and progressive principles as the Randolph Macon Academy, will be built during the coming year, and, if possible, receive pupils in September, 1890. Besides these, Liberty already possesses

shipping facilities and all the climatic, social, sanitary and pecuniary conditions requisite to the retention of skilled artisans once engaged in their employment. The manufacturers of tobacco, woolen goods, etc., already established here have found the local advantages so great that they have refused every inducement offered them to move to other points.

Every reasonable concession will be made to parties seeking locations for the establishment and operation of manufacturing plants, and upon application to the undersigned specific information will be furnished as to all details, both regarding the natural merits of the location, the character of raw materials within easy access and the terms offered to *bona fide* prospectors for sites.

Few better opportunities have been offered investors in Southern properties than the lands immediately adjacent to Liberty—lands possessing the intrinsic merit of natural fertility and productiveness in addition to close proximity to an embryo city,



RANDOLPH MACON ACADEMY.
LIBERTY, VA.

the usual quota of public and private schools, for which progressive Southern towns are noted.

These institutions insure an intellectual and moral tone in its society to the residents of Liberty that must give it pre-eminent attractions over mere manufacturing centers to the best class of settlers.

As a special recommendation to investors, Liberty possesses all the advantages of close proximity to the ore beds and coal fields of the famous mineral region of Southwest Virginia, is the county seat of Bedford, itself an unexplored mine of mineral wealth, representing granite, limestone, steatite, kaolin, the hematite and magnetic iron ores, asbestos, mica, graphite, mineral paints, fire-clay, &c.

Manufacturers would find here, within easy access and at low cost, all the raw materials used in their business. Cheap labor in great abundance, cheap fuel, excellent

bleamed with all the elements essential to steady and permanent growth. Some of these lands are already in the hands of improvement companies and have been laid out in beautiful, wide, shady avenues and divided in lots to meet the requirements of those desiring to build or to invest on a modest scale.

Liberty invites the closest scrutiny of its claims and does not require to indulge in extravagance or deception. Its growth is inevitable. With a superb climate, grand and imposing scenery, a surrounding country of great productiveness, invigorating mountain atmosphere, an unlimited supply of the purest free-stone water, unsurpassed healthfulness, good society and the finest schools for both sexes, enterprising and successful manufacturers, close proximity to the markets of the world, cheap labor, cheap lands, excellent shipping facilities, it lacks nothing but more people to make it a model city.

For Information address { J. LAWRENCE CAMPBELL, Secty. Liberty Improvement Co.
R. KENNA CAMPBELL, Manager Longwood Park, Va.

CHARLOTTESVILLE, VA.

OFFERS

Great Advantages and Liberal Inducements to Manufacturers

DESIRING TO LOCATE SOUTH.

Railroad Facilities, Cheap Rates and Rapid Transportation to all Points Unexcelled.

PERFECT CLIMATE.
UNLIMITED SUPPLY OF EXCELLENT WATER.

Gas, Electricity and Street Railway. Free Schools and Churches. Different Lines of Manufacturing Enterprises Already in Successful Operation Here.

A LIVE AND GROWING PLACE.

HOME CAPITAL WILL JOIN IN THE ESTABLISHMENT AND OPERATION OF FACTORIES.

COME AND SEE, OR WRITE TO **JOHN M. WHITE, President.**

CHARLOTTESVILLE INDUSTRIAL & LAND IMPROVEMENT CO., Charlottesville, Va.

SUMTER

South Carolina,

is situated in Sumter county, midway between Florence and Columbia—40 miles from each—95 miles from Charleston, 125 from Augusta, Ga., and 136 from Wilmington, N. C., in the heart of an

EXCELLENT AGRICULTURAL COUNTRY.

It is on the Wilmington, Columbia & Augusta Railroad, and is the terminus of the Central of South Carolina as well as present terminus of the Eutawville Railroad, which is in course of construction to connect with railroads from Norfolk, with prospects of another in the near future.

It has a rapidly-increasing population, which at present numbers about 4,000.

ITS HEALTH IS UNSURPASSED

and it is one of the finest locations in the South for a

Winter Resort

for those seeking refuge from the cold blasts of the North.

A \$50,000 HOTEL is now under discussion, and any reliable hotel man who would like to engage in the undertaking can learn of something to his advantage by addressing Mayor Mood.

ICE FACTORY

is wanted; an Electric-Light Plant is now being put in, and Water Works are in progress. Those seeking locations for

HOMES

or business will do well to correspond with the people of Sumter.

\$1,000 Bonus.

FREE SITES!

TO MAKE A

Profitable Investment,

Correspond with Secretary New Berne Board of Trade.

New Berne, North Carolina

IN RELATION TO THE

MANY SUPERIOR ADVANTAGES

—AND—

Ample Inducements

that **NEW BERNE** is holding out to those desiring to establish

FACTORIES WHERE THEY WILL PAY.

We are in the center of a most magnificent timber region. Wood of all kinds in abundance, and the best facilities for transporting to the mill and from the mill to market.

We are very anxious to develop our section by establishing factories. We have everything except capital, and we will make it pay capital to come to us.

We know that people flock to the booming sections, but still we do not want a boom, but a good, substantial and steady growth, such as we have had for the past ten years. The point is now reached with us that we can go no farther without capital to assist, and it will pay capital to investigate what we have to offer.

New Berne is now offering every inducement possible to aid manufacturing investors who will establish enterprises adapted to the natural advantages of this section. Address

Secretary New Berne Board of Trade

NOTICE

TO

Manufacturers.

The citizens of Houston, Texas, invite practical men with means to join them in building a

Cotton Factory,

FLOUR MILL,

Machine Shops

AND

FOUNDRY,

and will subscribe liberally to such enterprises.

HOUSTON

is the railroad center of Texas, has eleven railroads, 45,000 population, low freight rates, pure water, cheap fuel, and is a growing industrial city.

Correspondence and investigation invited.

ADDRESS

GEO. L. PORTER,

Chairman Executive Committee.

GEO. T. McWHORTER, President, Chickasaw, Ala.
JAS. M. ALLEN, Secretary, Waterloo, Ala.

Capital Stock \$200,000.

Waterloo Land, Mining & Mfg. Co.

of Waterloo, Lauderdale Co., Ala.

will encourage the location of manufacturing and industrial enterprises in the town of Waterloo by donations of town lots, mineral and timber lands, and stock of the company. Persons who contemplate engaging in enterprises of this character in North Alabama are requested to consider the advantages, present and prospective, of this point before deciding to locate elsewhere. Waterloo is situated on the north bank of the Tennessee river, below Colbert Shoals and consequently at the head of summer navigation on said river. During low-water stage light draft steamers run from Waterloo to Florence, Sheffield and other points above the shoals, freight being transferred at Waterloo. At this season goods may be billed from St. Louis, Cincinnati, Louisville, Evansville and all Western river cities to Waterloo cheaper than to any other town in Alabama. Chickasaw was respected. Waterloo is in the heart of the mineral belt, the immense beds of iron ore of Wayne and Lauderdale Counties lying in close proximity (5 to 10 miles). Limestone, silica and kaolin are abundant and close. The largest area of virgin forest in North Alabama lies in sight. The Land Company owns large bodies of this, together with many valuable town lots. The water supply is abundant and pure. Scores of springs bubble up within the town limits and the limpid waters of Second Creek wash the eastern border. The health of the community is unexcelled and the cost of living cheap. This is the largest shipping point for tan bark in the state. Present price of bark at landing \$4.50 per cord. Special facilities for tanning leather. The Land Company will donate a large body of fine timber and mineral land in a block to secure the construction of a railroad, north or east from Waterloo, such a road being needed in connection with the unequalled facilities of water transportation enjoyed by the town. Liberal aid will be given to persons who will locate industries here that give employment to labor and add value to raw material.

No matter what you intend to manufacture, consult the Waterloo Land, Mining & Manufacturing Co. and learn what facilities for the prosecution of your business the place enjoys and what inducements will be offered you to come. All questions truthfully and fairly answered. For further information consult the President, Secretary or Hon. Hiram Richardson, Vice-President, Waterloo, Ala.

200,000,000 TONS OF BROWN IRON ORE

IN SIGHT AT

BLUFFTON,

HIGH, HEALTHY AND HONEST.

GOOD PEOPLE AND GOOD WATER.

Cherokee County, Ala.

It is impossible to describe by words the enormous quantity of iron ore that is in sight on the land of this company. Said a prominent railroad man of the South: "I could not believe your statement as to the quantity, (200,000,000 tons in sight), but now that I have seen your ore deposits, I wonder how you put so low an estimate on them."

Prof. Robinson, of Bowdoin College, Brunswick, Maine, says: "I found at Bluffton iron ore in abundance, partly in solid cliff masses containing hundreds of thousands of tons, and partly in the form of gravel and small boulders lying in great banks similar in appearance to the gravel banks of New England. Whether there was as much of the gravel as of the bluff ore I could hardly judge, but it was very clear that the quantities of both were simply enormous."

G. S. Patterson, mining engineer, of Anniston, Ala., reports: "The amount of ore in sight was certainly beyond my expectation, though I was prepared to find a large deposit. The Bluff, as it is called, is a solid mass of ore on the side of a mountain, easily approachable, and can be mined cheaper than at any point in Alabama or Georgia, with which I am familiar."

Mr. Wm. H. Edmonds, of the Manufacturers' Record, says: "As to

the quantity of ore here, I don't suppose that all the furnaces in Alabama could use it up in a lifetime."—See Manufacturers' Record May 18, 1889, article entitled "BILL ARP AND BLUFFTON."

Ore can be delivered at furnaces built here at a cost not exceeding 50 cents per ton.

With high grade ores, analyzing over 50 per cent. metallic iron, delivered at the furnace at the above-named price, is there any possibility of such a place as Bluffton not being able to produce iron at figures which will yield a profit despite the dullest of dull times?

Prof. J. H. Pratt, of Birmingham, Ala., reports on samples selected from our property by Mr. Edmonds and Mr. G. S. Patterson as follows:

The sample of brown iron ore, marked "Bluff Ore," contains—	The sample marked "Gravel Ore" contains—
Metallic iron, - - 52.37 per cent.	Metallic iron, - - 53.23 per cent.
Phosphorus, - - - 0.782 "	Phosphorus, - - - 0.931 "
Silica, - - - - 14.60 "	Silica, - - - - 6.25 "
Water combined, - 8.10 "	Water combined, - 10.20 "
Moisture at 100° C - 2.50 "	Moisture at 100° C - 1.68 "

LARGEST DEPOSIT OF IRON

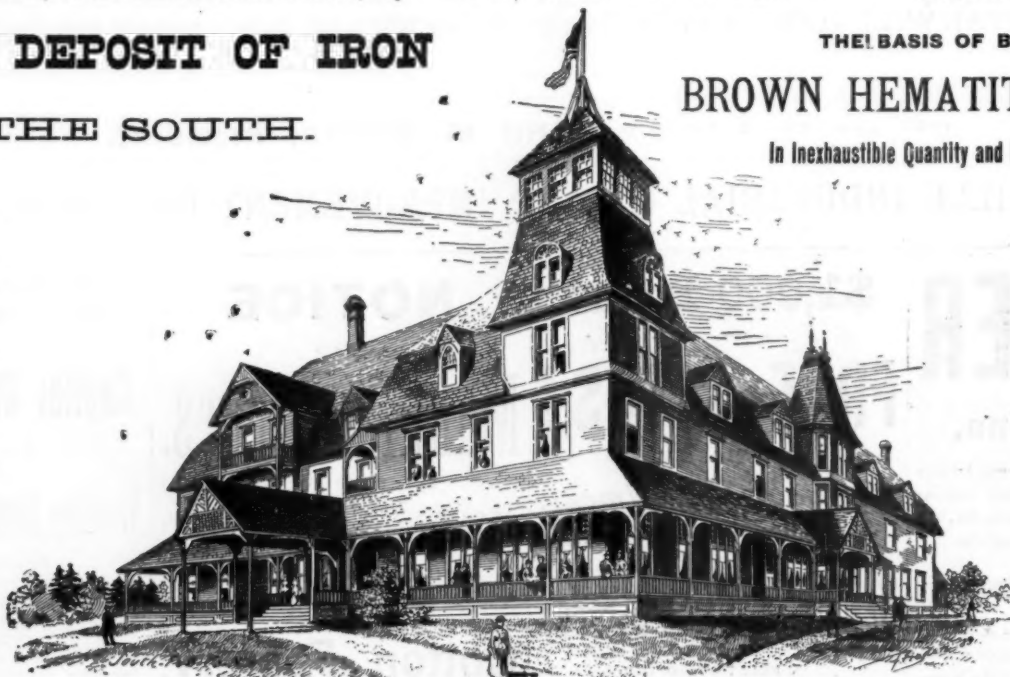
IN THE SOUTH.

THE BASIS OF BLUFFTON:

BROWN HEMATITE IRON ORE

In inexhaustible Quantity and Excellent Quality.

Ore can be delivered at furnaces built here at a cost not exceeding 50 cents per ton.



THE SIGNAL—NOW OPEN AT BLUFFTON.

Located on the Selma Division of the East Tennessee, Virginia & Georgia Railway, midway between Rome and Anniston, and only two miles and three-fourths from the East & West Railroad, of Alabama.

FREE MANUFACTURING SITES.

Rich Manganese Deposit.

There are several very large and rich outcroppings of Manganese Ore on the company's property, and the deposits have been examined by experts and pronounced exceedingly valuable. Specimens have been sent to various steel works in Pennsylvania, and the result is a large inquiry about the ore. From present development can be seen several hundred tons of this ore. There is always a ready market for manganese, and it is quoted at \$18 to 20 per ton in Pittsburgh and Chicago. More extensive work will be done on these deposits within a very short time, as the banks are easily accessible. Shipments will soon be made.

OTHER RESOURCES.

Fire Clay and Brick Clay—Yellow Ochre.

On this property are large deposits of fire clay, which has stood the highest test. Shipments have been made to Chattanooga, Tenn., and it is pronounced a superior quality. A fire brick works could be established here that would prove extremely profitable.

In brick clay there is an inexhaustible quantity, with an abundance of water running through the clay land. Brick manufacturing here would pay handsomely, and the company would lease the clay beds for a term of years at a very low royalty.

The four charcoal pig-iron furnaces surrounding this property are nearly as valuable to this place as if they were located on the land of the Bluffton Company. The pig iron manufactured by them could be bought and utilized here for every kind of manufactured iron. They are so near that freight on the raw material would be comparatively nothing. Surrounding us, as these furnaces do, it makes Bluffton a centre.

SEND FOR PROSPECTUS. ADDRESS

Bluffton Land, Ore & Furnace Company, Bluffton, Ala.

FORT PAYNE, Alabama.

★ COME TO ★

The NEW ENGLAND CITY of the South.

Climate Unsurpassed. Abundance of Pure Water. Drainage Excellent.

No Better Point in the Union
For Safe and Profitable Investment.

Situated on the MAIN LINE of the QUEEN & CRESCENT ROUTE, fifty-one miles Southwest of Chattanooga, and ninety-one miles North of Birmingham.

Elevation is from 895 to 1,600 ft above the sea, and above fever districts.

DeKalb County is entirely free from debt; taxes light.

Most liberal encouragement given to industries of every kind.

Iron Furnace and Rolling Mill will be constructed immediately, and other industries of various kinds are under contract.

Correspondence solicited from those who contemplate coming into the South to establish any kind of manufactories.

The different industries will employ at least two thousand skilled workmen, which will secure a population of over ten

thousand, independent of the many industries contemplated.

Iron of the best quality can be manufactured at as low cost per ton as in any other locality in the South.

Coal and iron are being developed rapidly of a superior quality.

Fine timber abundant and wood-working machinery of every kind can be profitably employed at this point.

The Company is prepared to give every reasonable encouragement to manufacturers who will locate at this point.

Correspondence solicited.

CAPITAL \$5,000,000.

OFFICERS.

President, - - -	COL. J. W. SPAULDING
First Vice-President, -	HON. D. H. GOODELL
Second Vice-President, -	HON. HENRY B. PEIRCE
Secretary, - - -	G. L. T. STEDMAN
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Manager, - - -	C. O. GODFREY

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FORT PAYNE COAL & IRON COMPANY, Fort Payne, Ala.

DENISON, TEXAS.

The "Yankee" City of the Southwest,

— AND —

✱ GATEWAY ✱

— TO THE —

GREAT STATE OF TEXAS.

The City of Denison presents the Finest Opportunity of any City in the Southwest for the Investment of Capital in Large or Small Sums.

DENISON is situated in Northeastern Texas near inexhaustible beds of coal and iron, surrounded by the finest fruit lands in the world, and adjoining the INDIAN TERRITORY, which, in the nature of things, must in a few years be opened to settlement.

The growth of Denison has been a natural one, the city having reached its present size—16,800 population—in sixteen years.

The city is regularly and beautifully laid out. Railroads run from it in four different directions. The Missouri, Kansas & Texas alone does an enormous business, having 54 miles of switch track in Denison, employing 500 skilled workmen and disbursing \$150,000 a month in wages.

The first public school in the State was established here, and the city's elegant two and three story brick school buildings, surrounded by attractive grounds, are well arranged for the use of the white and colored children. Its schools are in session ten months in each year.

We have sixteen church societies, seven of which are colored.

The city is well supplied with pure water from its numerous private wells—dug in the ground—and its first-class system of water works, giving the citizens ample protection against serious loss by fire, and enabling the insurance companies to rate the city first class as to fire hazard. Rate of taxation low.

The city has four miles of street railway, with six miles now building to be operated by steam motor; has two electric light companies and a telephone plant. It has an influential New England colony, and counts among its citizens people from every State in the Union.

A large hotel, to cost \$125,000, is to be erected here this year, and a large steel plant with \$2,000,000 of capital is contemplated.

30,000 bales of cotton were shipped from Denison in 1888. 200,000 baskets of strawberries and several carloads of peaches and other fruits have been shipped to market this season.

The Denison Canning Co., capitalized at \$100,000, has just been organized, and ground has been broken for a large fruit and vegetable canning factory.

A cotton mill company is being formed with a capital of \$500,000. Denison citizens have subscribed \$150,000 to this enterprise; Eastern capitalists will add \$350,000.

The climate of Denison is magnificent, situated nearly 800 feet above sea level. In summer it is warm, but far cooler than many cities farther North, and from 6 P. M. until after sunrise it is always cool. The city is very healthy.

The capacity of the ice factory is being increased from a daily output of 15 tons to 30.

The Denison Land & Investment Co. is prepared to give every reasonable encouragement to manufacturers, and solicit correspondence from such manufacturers as contemplate coming into the Southwest to locate.

Address all communications to

THE DENISON LAND & INVESTMENT COMPANY, DENISON, TEXAS.

Paid-Up Capital, - - - - - \$1,200,000.

OFFICERS:

W. P. RICE, President.

MILTON H. FRENCH, Vice-President and General Manager.

ARTHUR L. BERRY, Secretary and Treasurer.

DIRECTORS:

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J. M. FORD, Kansas City, Mo.
A. R. COLLINS, Denison, Tex.

B. J. DERBY, Burlington, Vermont.
PAUL LANG, Oxford, N. H.
M. V. B. CHASE, Augusta, Maine.

MILTON H. FRENCH, Thomaston, Maine.
A. H. COFFIN, Denison, Texas.
JOS. B. LINCOLN, Boston, Mass.

Morristown, Tenn.

The Plateau City of the Great Valley of East Tennessee

is beautifully located on a plateau of Bay's Mountain, about equi-distant from the Cumberland Mountains which bound East Tennessee on the northwest, and the Alleghany Mountains which bound it on the southeast, and is 300 feet above Holston River, which washes the north base of the plateau three miles from the city. Its mean elevation above sea level is about 1,350 feet, while the hills and mountains immediately surrounding it rise to an altitude of 1,935 feet, affording views of surprising extent and grandeur, and at the same time so modifying the temperature that the thermometer rarely registers higher than 90° in summer or lower than 10° in winter. Its drainage is admirable, and malaria is unknown. It has nearly trebled its population since 1880, having now about 4,000 inhabitants. It is the commercial and business center of the richest and most extensive agricultural district in the State, where all the cereals and all the grasses

and tobacco are grown to perfection, and where fruits and berries abound. It has hundreds of thousands of acres of uncultured forests accessible to it, abounding in Poplar, Pine, Hemlock, six varieties of Oak, Chestnut, Hickory, Cedar, Maple, Birch, Beech, Sycamore, Gum, Locust, Laurel, Buckeye, Mulberry, Ash, Cherry and Walnut. The Celebrated East Tennessee Marble underlies a part of the city, and it is surrounded with rich deposits of Iron Ore, Manganese Ore, Zinc Ore and Lead Ore. It has been said by one who has made a study of the subject, that within a radius of 50 miles around Morristown every variety of iron ore in the United States can be duplicated, and a coke can be made equal to Connellsville coke. We claim without hesitation that Morristown has in its immediate vicinity richer mineral ores, and a greater variety of them, than any city on the Continent.

MORRISTOWN

has Railroad Facilities equal to any city between Lynchburg and Chattanooga, and they will be speedily increased by the completion of the Carolina, Cumberland Gap & Chicago Railway, making the shortest possible railway route between the great cities on the Ohio River, Cincinnati and Louisville, and the seaboard cities, Charleston, Port Royal and Savannah. Besides, the Baltimore & Ohio Railway will probably extend a branch to it from Lexington, Va., and the Tennessee Midland will in all probability be built to Morristown, and a line be built giving direct connection with Atlanta.



MAP SHOWING RELATION OF MORRISTOWN TO THE COUNTRY AT LARGE.

MORRISTOWN

has a citizenship composed almost exclusively of native born Americans. It boasts a splendid system of Graded Schools, Five Commodious Brick Churches, the finest Courthouse in Upper East Tennessee, an Opera House that will seat 600 people, two Solid Well Managed Banks, a flourishing Building and Loan Association, two of the Largest Commercial Flouring Mills in the South, Stove Works, an Agricultural Implement Factory, two Woodworking Factories, a Tobacco Factory, a Carriage and Wagon Factory, and many industries of lesser note.

It is lighted with electricity, and has water works under contract, and is now inaugurating a system of street railways. Its climatic advantages, its unsurpassed record for healthfulness, its abundance of pure water, its central and beautiful location, its transportation facilities, its fruitful agricultural surroundings, its contiguity to rich and exhaustless fields of iron, manganese, zinc and lead ores, marble, coal and timber, mark it as a place destined to be the commercial, manufacturing and railway emporium of Upper East Tennessee, Western North Carolina and Southeastern Kentucky.

To expedite this destiny the city authorities have wisely exempted from taxation for ten years all manufacturing establishments that will give employment to fifteen or more persons, and the county authorities have done the like, so that manufacturing establishments will be exempt from all taxation for ten years, except the merely nominal tax for State purposes. There has been no "boom" or inflation of prices at Morristown, and, as it possesses within itself and contiguous to it almost every element of wealth, it now presents the most inviting field for investment of any city in the South.

Persons who may desire fuller information can obtain it by calling on or addressing

MONTVUE LAND COMPANY

POSTOFFICE BUILDING, — MORRISTOWN, TENNESSEE.

RANDOM NOTES ABOUT THE "MODEL CITY of the South."

THIS is the title bestowed upon Anniston, Alabama, at its beginning by persons who were impressed by the provisions its founders had made for the comfort and health of its future population, and the farseeing wisdom and judgment that entered into all the plans for its development. And it has amply maintained its right to the title. It has always been as its originators designed it should be—a model in every respect. This idea was incorporated in its foundation, and has been a part of its growth up to the present time.

Anniston is a town of about 12,000 inhabitants, and its population is rapidly increasing. Its numerous industries employ about 6,000 men, and pay out over \$60,000 a week in wages. It is one of the most beautifully located towns in America. Travelers who have visited it say that no more attractive site for a city could be found anywhere in the world. It is clean, sober, moral and healthful. It has churches, schools, water works, electric lights, gas, well-paved streets, handsome stores, fine residences and all the conveniences and attractions of a modern, well-appointed city. It is the industrial and commercial center of one of the richest iron districts in the world. It is surrounded by a splendid agricultural country. It has unsurpassed advantages for the manufacture of everything into which wood and iron enter. It possesses every attraction needed to make it a delightful place for a home or a health resort.

The one remark most frequently made in regard to Anniston is that it is a "solid town," and this is probably its most noteworthy feature. It has had no sudden, fictitious growth, no abnormal development, no unnatural stimulation to be followed by reaction and succeeding depression. Its development has been on a substantial and permanent basis. Manufacturers have been drawn here by the superior quality of Anniston iron, the abundance and cheapness of timber, and other natural advantages, as well as by its attractions as a place for a home. Its facilities and advantages as viewed from the standpoint of business are supplemented by its delightful and invigorating climate, its unsurpassed healthfulness and the beauty of its surroundings.

The following are analyses of the ores used by the Woodstock Iron Co.:

"REED'S BANK" ORE.		"SILVER CREEK" ORE.	
Metallic iron	60.02	Metallic iron	50.83
Phosphorus08	Phosphorus008
"WASHER BANK" ORE.			
Metallic iron	55.53		
Phosphorus06		

There is one peculiarity of Anniston that is very strong in its favor—the fact that the larger part of the manufacturing capital invested here is local capital. The founders of the city didn't simply buy up some thousands of acres of land and then say to the world, "come and take advantage of the unexampled opportunities we offer, buy our stock, buy lots from us, establish manufactures." They first showed their faith in Anniston's advantages by investing here their own money. They built the furnaces, the cotton mill, the car shops, the car-wheel works, the water works, the Anniston & Atlantic Railroad, the Anniston & Cincinnati Railroad, etc. They built the splendid pipe-works plant that has just gone into operation, and the two new furnaces about to go into blast. As fast as they made money they have invested it right here.

Anniston is blessed with a delightful and healthful climate. It is never cold—the most delicate persons can spend the greater part of the time out of doors the year round. In summer the climate is not such as to debilitate and weaken, as is the case in the North and in less elevated localities in the South. The thermometer registers less heat, and even the same temperature is far less apprehensive here than where the percentage of humidity is greater. Its location in the mountains ensures an unfailing breeze, and no matter how warm it may be in the sun through the day, the nights are always cool. The climate seems particularly suited to those who are troubled with throat or lung diseases. A physician living near here, who had suffered for years with a severe bronchial trouble, states that he had lived in Southern California, Colorado, Florida, at Aiken, S. C., and in the South of France, and that the climate of none of these places did him as much good as that of Anniston has done. There are persons here now in vigorous health who believe they would not be living but for their removal to Anniston.

Mr. Albert Howell, of Atlanta, said recently in an interview in the Atlanta Constitution: "Anniston is the coming city. I was there last week. You cannot conceive the bustle and business of that wonderful city. Homes are being built as rapidly as possible, but the city has outgrown itself, and two thousand residences, if they were started at once, would be rented before completion. The other cities may blow and bluster, but Anniston is building, and in ten years will be the best city in Alabama. You mark this prediction."

INFORMATION ABOUT ANNISTON, MAPS, PROSPECTUSES, &c., &c., MAY BE HAD FROM THE

ANNISTON CITY LAND COMPANY, Anniston, Ala.

SOME FACTS ABOUT FLORENCE, ALA.

Florence is in North Alabama, near the Tennessee line, on the Tennessee river, which is navigable here for large steamers. It is on the Memphis & Charleston Railroad, and the Nashville & Florence branch of the Louisville & Nashville Road.

There are many other places in the South possessing the advantages of a good climate, healthfulness, natural resources and manufacturing capabilities more happily combined and in a higher degree than can be found in any other part of the country. It is believed, however, that at no point in the South, and hence nowhere in America can there be found an aggregate of so many unsurpassed advantages and attractions as exist at Florence.

Florence can make iron as cheaply as any place in Alabama. It has facilities for the manufacture also of cotton goods equal to those of any other place. Anything that uses wood as a raw material can be made here at as low a cost as anywhere in the South.

Thousands of acres of iron ore of a high grade within a few miles of Florence are owned by Florence companies. Limestone is quarried within the town limits. There is enough of it to last for ages.

Cotton mills would get a large part of their supply from the country around Florence. Cypress creek furnishes water power and mill sites enough to make Florence the Lowell of the South.

North of Florence, and up the Tennessee river, there are large areas of timber, embracing a wide variety of hardwoods—forests that the ax has never touched.

Besides its industrial possibilities, Florence is a point of great commercial importance, and could be made the center of an enormous mercantile business. It has the advantage of both rail and river transportation and of competing railroads. Certain railroad movements are in progress now that will give it direct communication in every direction and by different lines.

Florence is surrounded by a wide extent of fertile and productive country, as well adapted for farming, stock raising, fruit growing, truck farming, dairying, &c, as any in the world. Further, it has a climate that is delightful the year round. Its health record cannot be surpassed. It has no malaria. In fact, people who live here enjoy a remarkable exemption from ailments of every sort. It has an abundance of the purest water.

For beauty of location Florence is without a peer. The Tennessee river at this point is as romantic and beautiful as the Hudson. The rolling character of the country, the slopes and hills and alternating valleys furnish a picture to charm an artist's eye. The lovely Cypress creek, a deep and rapid stream emptying into the river just below the town, presents at every turn in its tortuous course a scene of entrancing beauty. The views from some of the higher hills are as fair as the eyes of man ever rested on.

Florence is making more rapid progress, proportionately, than any other town in America. This is a strong statement but it is true. And its growth is on a solid and permanent basis.

Florence is not undergoing any wild real estate boom. Its managers are not seeking to advance real estate prices. It is not their plan to get a quick return for the money they have invested, by the rapid sale of lots at unnatural prices. It is their aim to first build up a town, to locate factories and secure a permanent population, when land will have an actual value and sell at prices from which there will not be a subsequent disastrous reaction. At present real estate is much lower in price than in any other town in the South that has made half the progress Florence has made.

Since the first of September, 1888, over 25 industries have been located at Florence, with an aggregate cash capital exceeding \$2,000,000. This remarkable growth is the result of efforts to induce people to simply investigate the attractions of Florence. Investigation and comparison with other places, on the part of any who are looking for a place in the South to locate, will in nearly every case result in the selection of Florence.

The following are some of the industries in Florence. Some of these are in operation; others are nearly ready for work and others have but recently commenced work on their buildings: A furnace about ready to go into blast, and another partly constructed; a stove factory; a hardware company, with a capital of \$300,000 to manufacture fine building hardware, &c.; a wagon factory, with capital of \$150,000; an agricultural implement works; a handle factory; a woodenware factory; a sash, door and blind factory; a cedar bucket factory; a pump factory; planing mills; a factory to make wooden butter plates such as grocers use; a flour mill; a cotton mill; a jeans factory; a gingham factory; a woolen mill; a cotton gin; a marble company; a roofing and paint company; a shoe factory; a suspender factory; a compress, packet and ferry company; three building and loan companies; a canning factory; several brick factories; a dummy railroad company, and several other enterprises.

The aggregate capital of the industrial, mercantile and development enterprises in Florence exceeds \$15,000,000.

A year ago the population of Florence was 2,000. It is now more than 8,000. There are more than 1,100 carpenters at work in Florence and they can't build houses fast enough to keep up with the increase in population. Before the first of January next there will be 15,000 people living here.

Limited space allows here only the briefest summary of a very few of the more important facts about Florence. For more detailed information write to any of the following companies. Or better still, come down and see for yourself. Investigation is all that Florence asks or needs.

Railroad and Improvement Co.

Lauderdale Manufacturing Co.

Cotton and Iron Co.

Florence Investment Co.

MIDDLESBOROUGH

AND

CUMBERLAND GAP.

The Future Iron *and* Steel Center of America.

THE PASSAGEWAY FOR RAILROADS BETWEEN THE WEST AND THE EAST.

A SOURCE OF COKE SUPPLY FOR THE SOUTH AND WEST.

The Furnaces and Factories already assured will make it one of the largest manufacturing towns in the South.

NEW INDUSTRIES

Being rapidly added to those already in operation and contracted for.

COAL, IRON, TIMBER

AND OTHER RAW MATERIALS.

Abundant Water for all Manufacturing Purposes.

WATER FROM PURE MOUNTAIN STREAMS FOR DOMESTIC USES.

DELIGHTFUL AND HEALTHFUL CLIMATE.

Surrounded by Valleys of Rich and Productive Farm Lands.

SEND FOR CIRCULARS, PROSPECTUS, MAPS, ETC., TO

ALEX. A. ARTHUR,

General Manager, Knoxville, Tenn.

JOHN M. BROOKS,

Resident Manager, Middlesborough, Ky.

Southern Railroads.

MONTHS ago the MANUFACTURERS' RECORD pointed out the inevitable heavy increase in Southern railroad traffic, and urged that arrangements should be made to prepare for it by securing additional rolling stock. This was done by many roads, and yet the demand for cars and engines far exceeds the supply. There is scarcely a railroad in the entire country that is not blocked with freight. The greatest rush of business ever known is now upon the roads, and in all sections shippers are crying for more cars. Business is restricted by the inability of the railroads to promptly handle the enormous traffic that is offered. In the South the demand for cars is extremely urgent. Coal miners, pig-iron producers, cotton dealers and others are all needing cars, and yet their demands cannot be fully met. The Southern roads are doing their best to accommodate shippers, and adding to their rolling stock as rapidly as possible. While the delays in shipments are at times a serious trouble to business men, it is gratifying to see this rush of freight, for it indicates general prosperity and a season of unprecedented activity.

A New Railroad.

[Spec. corresp'dence MANUFACTURERS' RECORD.]

CHESTER, S. C., October 25, 1889.

Capitalists in this city, Gaffney and other towns of South Carolina intend to build a railroad through the thermal belt of South Carolina, which will open up a country rich in agricultural, mineral and forest lands. The projected route is from Florence to Chester, thence to Gaffney City, then to Columbus, the capital of Polk county, North Carolina, and through a feasible gap in the Blue Ridge to the mountain plateaus beyond, where it is expected to follow either the valley of the Nolachucky or of the Pigeon river, and to push on to Knoxville. Charters have been secured and a company organized, which has now a surveying force in the field in charge of Chief Engineer C. L. Kingsley. Many conjectures are afloat as to whether this is an independent movement on the part of South Carolina capitalists, or whether it has the backing of some one of the great trunk lines that traverse that State.

I have assurances that this movement has been begun in good faith, and that behind it there is plenty of money to carry it to completion. The thermal belt of Polk county is one of the wonderful sections of the South. There is none more beautiful and healthful than that fronting the Blue Ridge in North Carolina, nor is there another for which man has done so little in proportion to the bounties of nature. The route already agreed upon runs in close proximity to the great falls of the Catawba river, with its 22,000 horse-power, and follows the course of the Broad river for 13 miles, passing several shoals with an aggregate waterfall of several hundred feet, little of whose perpetual power has been utilized. South Carolina cannot have too many railroad connections with Tennessee and the vast territory west of it, and it is the hope of the people of our flourishing city that this projected railroad will within three years be finished and in operation.

Subscribe to the MANUFACTURERS' RECORD.

Railroads Rolling up Money.

Last week was another week of enormous railroad traffic. From every quarter is heard the loud cry, "Give us more cars," while there has not been a single feeble appeal for lower rates. The reports of earnings have furnished ample proof that the traffic which the railroads are now handling is beyond precedent. It seems as if all at once every influence had combined to swell the volume of freight. Coal, coke and ore make the heaviest proportionate draft on the equipment, and the movement of all these has increased in an extraordinary degree, and at the same time the active condition of all manufacturing industries has furnished more freight of this class. Of course this condition of affairs is the natural feature of heavy crops, which in turn are pressing on the railroads, and so satisfactory assurance is given that the movement is not temporary, but is certain to continue through the winter and spring. The Pennsylvania has reported the largest earnings ever known in the month of September, both gross and net, and nearly all its subordinate lines, with the exception of the Baltimore & Potomac, have contributed to the increase. The Chesapeake & Ohio shows the handsome increase of 70 per cent. in the gross earnings, with a considerably increased mileage, however, but the operating expenses are only a little greater. The result is a gain in the net of over 150 per cent. The Richmond Terminal is also enjoying a season of phenomenal prosperity. The Richmond & Danville system showed an increase of \$156,284, which is a net gain of over 65 per cent. For the nine months the improvement is over 30 per cent. in the net earnings. The East Tennessee is doing even better, for the net profits for August were 60 per cent. greater, and on the Memphis & Charleston the net earnings were \$57,016, against \$3,048 for the month of August last year. These increases in the net earnings are even more important than the improvement in the gross earnings. 85 roads have now reported for the second week of October a net increase of 11.2 per cent. The only important losses are on the coal roads, while Louisville & Nashville gains over 30 per cent., and the Atchafalaya pushes toward the front with an improvement of 15 per cent. For the third week in October 29 roads report an increase of 13½ per cent., only three of them showing losses, while the Northern Pacific has the enormous increase of \$117,086, and the Louisville, New Orleans & Texas almost 50 per cent. On the whole, the reports average better than ever before in any week.—Wall Street Daily News.

A CORRESPONDENT of the MANUFACTURERS' RECORD, writing of the rapid increase in freight business on Southern railroads, says:

Railroads all through the sections where I have been are short of facilities and cars and locomotives to do their work. I was told that the Shenandoah Valley Road could put a dozen or more locomotives into instant and steady employment if they could get them. In Roanoke and neighborhood the amount of freight traffic is so enormous that there is a shortage of coal. Passenger traffic is blocked and delayed by the superabundance of freight. Most of the roads I have been over are increasing sidings and switches in a way to indicate that they are preparing to soon make their tracks double.

BUILDING RAILROAD—ST. ALBANS, W. VA., Oct. 17, 1889.—Have commenced work on road. Will want steel rails, engines, cars, bolts, spikes and all such things that are needed for a railroad. ST. ALBANS & COAL RIVER RAILROAD CO.

An Outline of a Big Scheme.

W. Colcord, of Boston, Mass., states that there is being organized in that city the Southern Coal, Iron & Railroad Co. to construct at once a system of railways in Tennessee and North and South Carolina to be known as the Blue Ridge Railway system. He says that "surveys are now in progress, and that the railroad will be built from Morristown, Tenn., via Kansas, Dandridge and Sevierville to a point near Marysville, thence to Madisonville and Athens, Tenn., with a division to Marysville and Knoxville from Sevierville over the Blue Ridge by a tunnel and a loop to Greenville, S. C., and Augusta, Ga., and with a division north via Waynesville to Asheville, N. C. Incorporation will take place next week, with election of officers, and construction will begin at once at these points. This company will operate extensively in coal and iron, and the general development of the country along the route. The capital represented is over \$5,000,000. L. C. Wolkins, of Boston, is the chief engineer. This system, when completed, will connect all the leading railroad systems of the South with the Southwest, West and Northwest."

The prospectus of the company contains the following:

The Southern Coal, Iron & Railroad Construction Co. is to construct a system of railways. The great Southwest, West and Northwest of the United States, also the Mexican Republic, are brought on an air line with the great seaport cities of Europe and South America, making Port Royal the great Southern seaport of the United States, and Greenville, S. C., the great railroad distributing center of the Northern points of commercial importance. Said system to be composed of the following consolidated lines: 1. The Carolina, Knoxville & Western Road and Louisville system. 2. The construction of the Blue Ridge Loop, from Pigeon Valley through Charleston, N. C., to Tennessee Forks and Chilhowee Pass, Vernon and Jalapa Plains to Cleveland, connecting with the St. Louis & East Tennessee Road. 3. Chilhowee Pass direct to Marysville, thence to Knoxville, Tenn., forming a link of railroads North, West, South and East.

The Blue Ridge Loop Railroad Co. is now being organized and incorporated under the laws of the State of South Carolina, with the corporate office at Greenville. Capital stock \$5,000,000, now on subscription. The system comprises 197 miles, to be a double-track, standard-gauge railroad, steel rails, 70 lbs. to the yard. This system will be constructed by an agreement with the Southern Coal, Iron & Railroad Construction Co., through the Smoky Range mountains, by a tunnel and a loop, so as to obtain an easy grade through the difficult mountain range between the States of North and South Carolina, Georgia, Tennessee and Kentucky, shortening the time distance 160 miles between the Southwest, West and Northwest, with the South Atlantic States, and North from the Southwest. This system will connect at Pigeon, S. C., with the Carolina, Knoxville & Western Road and the Atlantic Coast Line railroads at Greenville, and with the Western Railroad at Asheville, N. C., to Salisbury, N. C., with the Richmond & Danville system, forming a direct air-line route from the North to Cleveland via Pigeon Valley, Chilhowee Pass, Vernon and Jalapa, connecting at Cleveland with the Memphis and Mobile systems and the Georgia and Tennessee railroads, also at Chilhowee Pass via Marysville, Tenn., to Knoxville, Tenn., connecting by this link four great systems for through transit. Three powerful locomotives, steam shovels, track-laying apparatus, the necessary cars for construction purposes and 1,500 tons of rails are now being purchased to commence construction at the three points, and the surveys are completed.—Railway Age.

Railroad Construction

Anniston, Ala.—Railroad.—McDonald & Campbell have commenced work on the Jacksonville, Williamsport & Anniston Railroad previously mentioned as to be built from the East & West Railroad 4 miles north to Jacksonville via Jacksonville to Anniston. Road with branches will be about 20 miles long.

Asheville, N. C.—Electric Railroad.—The Asheville & Cullerburg Electric Street Railroad Co. has received permit to build its road lately mentioned and will start work at once.

Asheville, N. C.—Electrical Railroad.—The West Asheville Improvement Co. will build an electrical railroad, 3½ miles long, from the passenger depot to the Sulphur Springs Hotel, reported elsewhere in this issue to be enlarged.

Atlanta, Ga.—Electric Railroad.—Contract for outfit for the West Atlanta Electric Railroad, previously mentioned, has been awarded to the Daft Electric Light Co., of New York city. Work is to be started at once. W. B. Miles is president of road.

Atlanta, Ga.—Electrical Railroad.—The Union Street Railway Co. has asked for permit to operate its road by electric power, reported previously. It is investigating the different systems.

Atlanta, Ga.—Railroad.—The bill previously reported as introduced in the legislature to incorporate the Marietta, Dahlonega & Northern Railroad Co. has become a law.

Baltimore, Md.—Street Railroad.—The Baltimore City Passenger Railway Co. is investigating the Judson system of operating roads, and will probably build, or have built, 1 mile of experimental road with a view to its adoption on its entire lines if practicable.

Belton, Texas.—Railroad.—There is talk of building a railroad from Belton to Temple.

Bonham, Texas.—Street Railroad.—A street railroad is projected.

Bowling Green, Ky.—Street Railroad.—The Park City Railroad Co., previously reported as to build a street railroad, will lay track heavy enough for electric cars.

Christianburg, Va.—Railroad.—The Northern capitalists mentioned in this issue as leasing or purchasing iron ore lands will build a railroad if they develop the property. B. R. Linkons can give information.

Churchula, Ala.—Pole Road.—W. J. Busch and W. O. McMahon are building a pole road from Thirty-One Mile Bluff, on the Mobile river, towards Churchula. It will be 8 miles long.

Crawfish Springs, Ga.—Railroad.—The company mentioned in this issue as organized by S. T. Osburn and others to manufacture pencil cedar will build a track from the depot to its factory.

Dermott, Ark.—Railroad.—H. Story has received contract to grade six miles of the Houston, Central Arkansas & Northern Railroad.

Egypt, N. C.—Railroad.—The Egypt Coal Co. is reported as at work on the railroad lately reported as to be built to the Richmond & Augusta Air Line Railroad. Distance is said to be 10 miles.

Johnson City, Tenn.—The Watauga Valley Railroad Co. has been chartered to build a road to extend from or some point near Johnson City via Elizabethton to the North Carolina State line at a point where the Watauga river crosses. Clinton B. Fisk, 96 Broadway, New York city, is probably interested.

Luverne, Ala.—Railroad.—The Alabama Midland Railroad Co. (office, Troy) has, it is stated, let contract for a 26-mile extension of its road south from Luverne.

Macon, Ga.—Railroad.—The contract for grading the Macon & Birmingham Railroad, previously mentioned, from Macon to Greenville, 65 miles, has been awarded to J. S. McTigue & Co., of Memphis, Tenn. Amount is said to be \$350,000. Work is to be completed in 6 months. They want sub-contractors for about 2,000,000 yards of earth and rock work. Profiles and specifications can be seen at their office.

Madison, Ga.—Dummy Railroad.—Parties have asked for permit to build a dummy railroad.

Memphis, Tenn.—Terminals.—The St. Louis, Iron Mountain & Southern Railroad Co. (office, St. Louis, Mo.) has purchased \$25,000 of land to enlarge terminal facilities.

Memphis, Tenn.—Electric Railroad.—The railroad lately reported as to be built to Raleigh by the Memphis Belt Line & Suburban Railroad Co. will be nine miles long, and will be operated by both electric and steam power. Work will be started within two weeks; 56-lb. rails are to be used.

Memphis, Tenn.—Railroad.—The Raleigh Springs Railroad Co. has been chartered by W. B. Mallory, John T. Fargason, John Gaston, W. J. Crawford and James A. Omberg.

Mobile, Ala.—Railroad.—The Mobile, Jackson & Kansas Railroad Co. will hold a meeting on November 7 to issue a mortgage and to consider issuing \$1,000,000 of preferred stock.

Montgomery, Ala.—Railroad.—The Montgomery, Tuscaloosa & Memphis Railroad Co. will hold a meeting on November 15 to increase capital stock.

Morristown, Tenn.—Railroad.—W. Colcord, of Boston, Mass., states that there is being organized in that city the Southern Coal, Iron & Railroad Co. to construct at once a system of railways in Tennessee and North and South Carolina to be known as the Blue Ridge Railway System. He says that "surveys are now in progress, and that the railroad will be built from Morristown, Tenn., via Kansas, Dandridge and Sevierville to a point near Maryville, thence to Madisonville and Athens, Tenn., with a division to Maryville and Knoxville from Sevierville over the Blue Ridge by a tunnel and a loop to Greenville, S. C., and Augusta, Ga., and with a division north via Waynesville to Asheville, N. C. Incorporation will take place next week, with election of officers, and construction will begin at once at these points. This company will operate extensively in coal and iron and the general development of the country along the route. The capital represented is over \$5,000,000. L. C. Wolkins, of Boston, is the chief engineer. This system, when completed, will connect all the leading railroad systems of the South with the Southwest, West and Northwest."

Nashville, Tenn.—Electric Railroad.—Dr. William Morrow has purchased a controlling interest in the Main Street & Lischey Avenue Street Railroad Co., operating an electrical railroad. He will consolidate all roads in East Nashville.

Nashville, Tenn.—Railroad.—Lewis T. Baxter, W. E. Ballard, H. S. Jackson, J. C. Bradford and F. P. McWhirter have chartered the Memphis, Nashville & Atlantic Railway Co. to construct a road from Nashville to Glen Mary, with a branch to some point on the Tennessee river in Rhea county.

Ocala, Fla.—Street Railroad.—The Ocala Street & Suburban Railroad Co., lately mentioned as securing a renewal of franchise, will build one mile of road at once.

Palatka, Fla.—Street Railroad.—The Palatka & Heights Street Railway Co. contemplates, it is said, extending its line.

Palestine, Texas.—Ties.—G. W. Burkett has received contract to furnish ties for all the International & Great Northern Railroad except north of Palestine.

Paragould, Ark.—Ties.—Bertig Bros. have received contract to furnish the St. Louis, Arkansas & Texas Railroad Co. with 275,000 ties.

Rosedale, Miss.—Railroad.—A railroad will probably be built from Rosedale to Bogie Phalia. Charles Scott can probably give information.

Rutherfordton, N. C.—Railroad.—P. P. Dickinson, of New York city, lately mentioned as contracting to build part of the Charleston, Cincinnati & Chicago Railroad (office, Rock Hill, S. C.), has contract for building the road from Rutherfordton to the Mitchell county line, and has started work. He is represented by Charles O. Colton.

San Angelo, Texas.—Railroad.—W. A. Savage, of Oxford, Ga., is reported as interesting parties in a proposed railroad from San Angelo to some point on the Texas & Pacific Railroad.

Smithsonia, Ga.—Railroads.—James M. Smith, lately reported as contemplating extending his road from Smithsonia to Washington, 28 miles, has a charter for the Smithsonia, Lincolnton & Augusta Railroad from Smithsonia via Lincolnton to Augusta; also a charter for the Smithsonia & Carnesville Railroad from Smithsonia via Danielsville and Carnesville to Richmond & Danville Air Line. He expects to do some work on both roads during 1890.

Southport, N. C.—Railroad.—The South Atlantic & Northwestern Railroad Co., reported last week as purchasing the hotel property of D. G. Curtis, on the water front, has line fully surveyed as far as the Tennessee State line, and about 40 miles located. It expects to start work soon.

Sparrow's Point, Md.—Electrical Railroad.—The Pennsylvania Steel Co. is building an electric railway for hauling materials for its furnaces mentioned elsewhere in this issue.

Tampa, Fla.—Railroad.—Scott Walker has the contract for building the extension of the Florida Central & Peninsula Railroad from Plant City to Tampa, reported last week.

Uvalde, Texas.—Street Railroad.—The Uvalde Street Railroad Co. has been incorporated by F. A. Piper, J. H. Clark, J. G. Brown and others. The capital stock is \$5,000.

Waco, Texas.—Bridge.—It is stated that the San Antonio & Aransas Pass Railroad Co. (office, San Antonio) will soon build a bridge across the Brazos river to extend road northward.

Yazoo City, Miss.—Railroad.—The Georgia Pacific Railroad Co. (office, Birmingham, Ala.) is thinking of building a branch road from Johnsonville or Itabena to Yazoo City.

NEW FLOUR MILL.—DANVILLE, KY., October 24, 1889.—We expect to build soon as possible a 75-bbl. flour mill.

FUNK & ANDERSON.

Southern Financial News.

NEW BANKS.

Arkansas City, Ark.—The bank lately reported as to be started by T. H. Leslie, of Stuttgart, will have a capital of \$25,000.

Bristol, Tenn.—A \$50,000 bank has been organized and will start business about November 15. J. B. Hash, late of Johnson City, will be president, and F. N. Hash, cashier.

Cedartown, Ga.—The Bank of Cedartown has been organized with P. A. Adams as president; R. G. Herbert, vice-president, and R. C. Pitts, cashier.

Chattanooga, Tenn.—New England parties are organizing a bank whose capital is to be \$1,000,000.

Florence, S. C.—The Bank of Florence, reported in last issue as increasing capital stock to \$50,000, will add a savings department.

Friar's Point, Miss.—The \$50,000 bank previously mentioned as being formed will commence business about December 1.

Gadsden, Ala.—The name of the \$100,000 bank lately reported as to be started by Jay Street, J. Nolin and others is the Queen City Bank.

Graham's Turn Out, S. C.—The name of the \$25,000 bank lately mentioned as being organized is the People's Bank. S. D. M. Guess is president; J. E. Steadman, vice-president, and H. C. Rice, secretary.

Jackson, Miss.—The Bank of Jackson, capital \$100,000, has been chartered under the State laws. Col. W. L. Hemingway will probably be president.

La Fayette, Ga.—A bank is to be started.

Livingston, Tenn.—A bank has been organized with W. W. Goodpasture as president, and Moses Miller as cashier. Capital will be \$20,000. Business will commence about December 1.

Quannah, Texas.—The name of the bank lately reported as to be organized by J. G. James, of Henrietta, W. E. Johnson and others is the First National Bank. Capital is \$50,000. Business has commenced.

Rockingham, N. C.—Efforts are being made to organize a bank. Robert L. Steele can give information.

Selma, Ala.—The Alliance Bank, capital \$100,000, is being organized.

West Point, Miss.—The People's Bank is being organized. J. H. L. Gerding will be president.

Thirty-three national banks were started in Texas from January 1 to about October, with capitals aggregating \$2,895,000.

Cordele, Ga., will decide a popular vote on December 6 whether or not to issue \$14,000 of bonds to build water works.

Memphis, Tenn.—The Kansas City & Memphis Railway & Bridge Co. has issued \$3,000,000 of (\$1,000) bonds bearing 5 per cent. interest, payable semi-annually. They mature in 40 years.

Murfreesboro, Tenn.—J. E. Thompson, of Manchester, will enlarge the Murfreesboro Water Works, and wants to float \$20,000 of bonds.

Tate, Ga.—The Georgia Marble Co. has issued 20-year 6 per cent. bonds to retire present indebtedness and for improvements.

Augusta, Ga.—The Sibley Manufacturing Co., operating cotton mills, has declared a dividend of \$3.50 per share for the last six months.

Portsmouth, Va.—A dividend of \$5 per share on the common stock of the Seaboard & Roanoke Railroad Co. has been declared.

STEAM AND ELECTRIC RAILROAD.—MEMPHIS, TENN., Oct. 24, 1889.—We will build the Memphis & Raleigh Springs Railroad, and will operate with both steam and electricity. It will be nine miles long, and laid with 56-lb. T rails. Have a very fine water-power; celebrated springs; beautiful summer resort; rights of way nearly all secured; city contract signed; commence at Memphis custom-house; stock subscribed; begin work in two weeks. E. SCOTT.

ANOTHER CONTRACT ON THE THREE C'S ROAD, RUTHERFORDTON, N. C., Oct. 26, 1889.—The contract for building the Charleston, Cincinnati & Chicago Railroad from its present terminus at this place to the Mitchell county line has been let to Mr. P. P. Dickinson, of New York city, and whom I represent here. The construction of same is entered upon, and it will be pushed through with energy, &c. CHAS. O. COLTON.

RAILROAD PROJECTED.—SOUTHPORT, N. C., Oct. 25, 1889.—The South Atlantic & Northwestern Railroad has been fully surveyed as far as the Tennessee line and some 40 miles located. It is expected that the work of construction will be started within 30 days. E. B. STEVENS.

WATER WORKS PROPOSED.—GREEN COVE SPRINGS, KY., October 22, 1889.—We are talking of putting in water works.

W. E. COLEMAN, Mayor.

A \$5,000,000 Deal in Land Made at Chattanooga.

[Special dispatch to MANUFACTURERS' RECORD.] CHATTAHOOGA, TENN., October 29, 1889.

W. K. Burton & Co.'s big deal—East Chattanooga Land Co.—has been consummated with wealthy New England syndicate for \$5,000,000—all paid up; all papers signed. The property consists of 2,000 acres—sites bordering city—and 1,500 acres rich iron-ore lands. The purchasers are among the most prominent bankers and capitalists of Boston, Lowell, Lynn, Manchester, Mass., Portland and Oakland, Me. Large excursion composed of members of syndicate and friends starts from Boston November 14th on visit to Chattanooga. A bank with \$1,000,000 capital is about ready to organize here. The parties are also New England capitalists, with local parties interested. PERCY CLARK.

A NEW PROCESS FOR MAKING STEEL TO BE TESTED.—CHATTAHOOGA, TENN., Oct. 24, 1889.—Myself and another party have a process of making steel out of our pig in this section. Having shown a sample to an expert that was made by this process, he pronounced it fine. The cost will be comparatively small. We will erect a cupola and puddling furnace here to give it a full trial. David Gibson has just bought lands and is making contract for building to make plows, sinks, wheelbarrows, etc., here. J. B. DOWDEN.

WILL ADD MACHINERY.—ELKIN VALLEY, N. C., Oct. 23, 1889.—We intend to put in new looms and wool washer in our Elkin Valley Woolen Mills. GWYN & CHATHAM.

FREDERIC TAYLOR & CO. Bankers and Brokers, 84 BROADWAY, NEW YORK CITY.

Members of the New York Stock Exchange.

Baltimore Stock Exchange Quotations.

Reported by ALEXANDER BROWN & SONS, Bankers, Baltimore.
BALTIMORE, Oct. 30, 1889.

	BID.	ASKED.
Virginia 6's Consols C.....	40	40
Virginia 3's, new.....	67	67
Virginia Consol Coupons, N. F.....	19 1/2	19 1/2
Ga. Car. & N.....	102 1/2	102 1/2
Wil. Col. & Aug. 6's.....	118 1/4	118 1/4
Atlanta & Char. 1st, 7's.....	119 1/2	119 1/2
Atlanta & Charlotte income 6's.....	103 1/4	103 1/4
Col. & Green. 1st, 6's.....	105 1/4	105 1/4
Col. & Green. 2d, 6's.....	82	84
Va. Midland, 2d, 6's.....	116 1/4	116 1/4
Va. Midland, 5th, 5's.....	99 1/2	99 1/2
Char. C. & Aug. 1st, 7's.....	111	111
West Va. Central 1st, 6's.....	109	109
Ga. Pacific 1st, 6's.....	113 1/4	113 1/4
Ga. Pacific 2d.....	80 1/2	81 1/4
Cape Fear and Y. Valley 6's, A.....	105 1/2	107
Cape Fear & Y. Valley 6's, B.....	103	103 1/2

Foreign Exchange Quotations.

ALEXANDER BROWN & SONS.
BALTIMORE, October 30, 1889.
Bank of England rate 5%.

Sterling weak.—	Commercial.
Selling.	60 days..... 479 1/2
60 days..... 481 1/2	
3 days..... 485 1/2	
France.—	
Selling.	60 days..... 520 1/2
60 days..... 520 1/2	
3 days..... 518 1/2	
Reichmarks.—	
Selling.	60 days..... 94 1/2
60 days..... 94 1/2	
3 days..... 95 1/2	
Guilders.—	
Selling.	60 days..... 40 1/2
60 days..... 40 1/2	
3 days..... 40 1/2	

CHAS. ROBERTS, President.
B. T. KIMBROUGH, Vice-President.
W. A. WEST, Cashier.
H. P. BRANHAM, Assistant Cashier.

Merchants & Farmers' Bank, Oxford, MISS.

Subscribed Capital, \$100,000. Paid-up Capital, \$50,000.
CORRESPONDENTS: New York Western National Bank; New Orleans State National Bank.
SPECIAL ATTENTION PAID TO COLLECTIONS.

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Orders executed in New York and Boston for buying and selling stock of the

Anniston City Land Co.

We are prepared to carry same on MARGIN.

We make a specialty of all

Southern Securities.

JOHN L. WILLIAMS & SON, BANKERS, —RICHMOND, VA.

Our MANUAL OF INVESTMENTS, the largest publication of the kind published by any banking house in the United States, may be had upon application by parties interested.

Richmond Stock Exchange Quotations.

Reported by JOHN L. WILLIAMS & SON, Bankers, Richmond.

RICHMOND, VA., Oct. 29, 1889.

	BID.	ASKED.
North Carolina 4's, 1910.....	96 1/2	97 1/2
North Carolina 6's, 1910.....	124	126
Virginia New 3's, 1932.....	66 1/2	66 1/2
Lynchburg, Va., 5's, 1915.....	103 1/4	103 1/4
Petersburg, Va., 5's, 1915.....	103 1/4	103 1/4
Norfolk, Va., 5's, 1911.....	104	104
Richmond, Va., 5's, 1922.....	110	111
Atlanta & Charlotte Ry., 1st 7's, 1907.....	119	121
Atlanta & Charlotte G'd 6's, 1900.....	102 1/2	102 1/2
Char. Col. & Aug. R.R. Gen. 6's, 1932.....	107	108
Georgia Pacific Ry. 1st 6's, 1922.....	113	114 1/2
Georgia Pacific 2d 5's, 1923.....	80 1/2	81 1/2
Ga. Pacific Income, 5's.....	30	32
Petersburg Railroad Class A 5's, 1926.....	104	108
Petersburg Railroad Class B 5's, 1926.....	105	108
Rich. & Danville R. R. Gold 6's, 1915.....	118	118
West N. Car. R. R. Gen. 6's, 1914.....	97	97
Northwestern N. Car. R. R. 1st 6's.....	101 1/2	101 1/2
Atlanta & Charlotte R. R. Stock.....	88 1/2	90
North Carolina Railroad Stock.....	104	107
R. F. & Pot. R.R. Div'd Obligations.....	111 1/2	112
Virginia Midland Railway Stock.....	44	45
Sloss Iron & Steel Co. Stock.....	92	93
Sloss Iron & Steel Co. 1st 6's.....	64	65
Sloss Iron & Steel Co. 2d 6's.....	64	65

ALEX. BROWN & SONS

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BROWN, SHIPLEY & CO., LONDON.

Financial Agents of the United States Government in England.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

*Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Anniston—Paper Mill.—Carrollton (Ga.) parties are endeavoring to organize a stock company to build a paper mill.

Anniston—Oil Mill.—C. C. Huckabee, lately reported as to move his cotton-seed oil mill from Marion to Anniston, will buy some machinery of larger capacity for same.

Birmingham—Publishing.—The Daily News Co. will put in a new Goss perfecting press.

Birmingham—Coal Mines, &c.—The Consolidated Warrior Coal Co. has been chartered at Richmond, Va., to develop coal lands, &c., in Alabama, with E. W. Rucker, of Birmingham, as president; W. J. Behan, New Orleans, La., vice-president; S. H. Buck, secretary, and J. F. Johnston, treasurer. The capital stock is to be not less than \$1,000,000 nor more than \$2,000,000.

Birmingham—Soap Factory.—J. D. Coghlin, of Atlanta, Ga., will not purchase the Birmingham Soap Factory, reported last week. He is interested in the Georgia Soap Co., of Atlanta.

Birmingham.—The Magic City Machine Co. has been incorporated with capital stock of \$3,000.

Centre—Iron Furnace.—R. P. Sibley, P. D. Langdon, William Langdon and Virgil Warmack have incorporated the Langdon Iron Co., capital stock \$100,000. They will repair the Stonewall charcoal iron furnace, which has long been out of blast, and put it in operation.

Collinsville—Iron Mine.—Willford & McFalls are opening an iron mine 4 miles from Collinsville.

Collinsville.—New England capitalists will, it is reported, purchase 1,000 acres of land with a view to building up a town.

Coldwater—Pumping Station.—The contract for erecting the boiler and engine-house for the water works being built at Anniston by T. G. Bush, of Mobile, previously reported, has been let by the Anniston Construction Co. to McDonald & Campbell, of Anniston. It will be 50x100 feet and cost about \$10,000.

Dadeville—Spoke and Handle Factory, &c.—J. F. Turner will start a factory for manufacturing spokes and handles, well buckets, wheelbarrows, &c. He will use 50 horse-power boiler and 30 horse-power engine.*

Dadeville—Cotton Factory.—Thomas Barron, E. B. Langley, O. P. Sanford and others will incorporate the stock company to build the cotton factory at Sanford Falls lately mentioned. The capital stock will be \$50,000.

Decatur—Iron Furnace.—E. C. Gordon has leased the charcoal iron furnace owned by the Decatur Land, Improvement & Furnace Co., lately mentioned. He will repair and put in operation.

Eufaula—Fertilizer Factory.—W. N. Reeves and others have organized the Chattahoochee Fertilizer Co. to establish the fertilizer factory in the old oil mills reported last week. Capital stock is \$10,000. Mr. Reeves is president.

Florence—Saw Mill.—Charles Foster, of Mankato, Minn., has purchased 300 acres of timber land and will erect a saw mill.

Florence—Carpet Mill.—Philadelphia parties are organizing a company to build a large carpet mill. Capital stock will probably be \$500,000. The Florence Cotton & Iron Co. can give information.

Florence—Iron Furnace.—It is reported that another iron furnace will be built—probably refers to intended resumption of work on the W. B. Woods furnace, owned by the Florence Cotton & Iron Co.

Fort Payne—Machine Works.—The Dustin & Hubbard Manufacturing Co., previously reported as moving its machine works to Fort Payne, has commenced the erection of the necessary buildings.

Fort Payne—Asphalt Works.—A \$40,000 stock company has been organized with Henry B. Pierce as president; J. H. Mendall, vice-president and general manager, and C. H. Clifford, secretary and treasurer, for the manufacture of asphalt paving blocks. A site for the works has been selected.

Helena—Rolling Mill.—It is reported that the rolling mill of the Central Iron Works will be thoroughly repaired and put in operation.

Hollywood—Mill.—H. J. Johnson will build a mill and put in machinery of 80 horse-power.*

Milton—Pottery.—Willis Bros. have started a pottery recently.

Mobile—Stone Works.—The Lichtentag Patent Stone Co. has been incorporated by S. Richard, H. Piser and John L. Rapier to manufacture the Lichtentag stone pavement, previously reported. Capital stock is \$50,000.

Mobile—Shingle Mill.—J. W. Brownlee & Co. are considering the changing of their saw mill to a shingle mill.

Montgomery—Land.—William M. Davis, of St. Louis, Mo., and Thomas J. Scott, of Montgomery, have purchased about 300 acres of land near Montgomery and will develop.

Rock Mills—Cotton Mill.—The Rosedale Manufacturing Co. will overhaul its spinning department, putting in new rings, &c., and has not made the improvements as stated last week.

Selma—Wagon Factory.—Canning & Son are enlarging their wagon factory.

ARKANSAS.

Batesville—Manganese Mine, &c.—Skinner & Abbott, who are developing manganese lands, will erect an overhead carrier with automatic buckets to carry ore to the Batesville Branch Railroad. Cost will, it is said, be \$30,000.

Batesville—Water Works and Electric-light Plant.—The Batesville Water Works & Electric-light Co. has commenced work on its plants previously reported to be built.

Big Creek—Saw Mill.—The saw mill mentioned in last issue as being erected at Big Creek, Tenn., by J. W. Vincent & Co. is being built at Big Creek, Ark.

Camden—Gin.—J. W. Parker will rebuild his cotton gin reported in this issue as burned.

Camden—Sewerage System.—A sewerage system will probably be built. The mayor can give particulars.

Camden—Wagon Factory.—Thompson & Agee will probably organize a stock company to enlarge their wagon factory.

Conway—Saw Mill.—A saw mill has been built.

Little Rock—Iron Works.—Rawlings & Ketcher have started galvanized iron works.

Little Rock—Lock Factory.—P. P. Cline, of Gallatin, Mo., talks of organizing a stock company to manufacture his patent lock.

McRae—Mill.—A mill is reported to be built.

Mount Ida—Publishing.—The publication of the Herald has been commenced.

Newport—Publishing.—Conway & Cloyd have commenced the publication of the Optic.

Smithton—Saw Mill.—A saw mill has been built.

Stuttgart—Saw Mills.—Several saw mills are to be built along the line of the Stuttgart & Arkansas River Railroad.

Stuttgart—Brick-yard.—Henry Flood has purchased \$5,000 of machinery for a brick-yard.

Warren—Cotton Factory.—A stock company is being organized to build a cotton factory.

White River—Gin.—M. F. Green has erected a cotton gin.

FLORIDA.

Green Cove Springs—Brick-yard.—It is reported that a brick-yard with a daily capacity of 50 M brick will be established on the property of Mrs. Houghton.

Jacksonville—Trunk Factory.—Richard Walzer has started a trunk factory.

Jacksonville—Canal.—The Fernandina, Jacksonville & St. Augustine Ship Canal & Transportation Co. has been organized by M. Bartholomew, J. E. T. Rowden, Z. Harrison and others, to build a canal from Fernandina to Jacksonville and a railroad from Jacksonville to St. Augustine.

Jacksonville—Water Works.—The water mains will be extended in East Jacksonville and fire hydrants put in.*

Jacksonville—Phosphate Mine.—G. R. Boaz will develop a phosphate mine on the Alafia river as soon as railroad transportation can be secured.

Markham—Box Factory.—Mr. Sheets will start an orange-box factory.

Orlando.—The Orlando Building & Lot Co. has been organized with T. A. Widrig as president.

Orlando.—The Orlando Land Co. has been incorporated at Newport, Ky., by John Weidenbomer, Charles J. Helm, George G. Lindsey and others. The capital stock authorized is \$69,900.

San Antonio—Lumber Mill.—The San Antonio Mill Co. will put new machinery in its lumber mill. Same is ordered.

Starke—Rice Mill.—A rice mill will probably be erected.

Tavares—Bridges.—T. S. Johnson will receive proposals until November 5 for constructing 3 wooden bridges 10 feet wide and 40, 50 and 55 feet in length.

GEORGIA.

Albany—Cotton Compress.—The Albany Compress Co.'s compress was not burned, as stated last week.

Albany—Fertilizer Factory.—The Albany Fertilizer Co. will enlarge its factory at a cost of \$30,000.

Atlanta—Match Factory.—A \$25,000 stock company has been organized to put in operation again the Piedmont Match Factory.

Atlanta—Railroads.—Bills have been introduced in the legislature to incorporate the Fairmount Valley Railroad Co., the Dublin, Blackshear & Southern Railroad Co., the Bainbridge & North-eastern Railroad Co., the Union Point & Elberton Short Line Railroad Co., the Chattanooga & Gulf Railroad Co., and the Augusta Railway, Investment & Banking Co.

Atlanta—Electric Plant.—Contract for furnishing electric plant, &c., for the West Atlanta Electric Railroad, previously mentioned, has been awarded to the Daft Electric-Light Co., of New York city. Work is to be started at once. W. B. Miles is president of road.

Atlanta—Electric-light Plant.—The Atlanta Gas Light Co., reported last week, contemplates adding an electric-light plant, but has not yet decided on same.

Brunswick—Oyster Planting, &c.—Mr. Beardsley and other Connecticut parties will plant oyster beds and contemplate starting a canning factory after awhile.

Brunswick—Dry-dock.—A balance dry-dock of about 1,200 tons lifting capacity is to be built. This is probably the same as the ship-yard lately mentioned.

Brunswick—Foundry and Machine Shop.—Arrangements are being made for the erection of a large foundry and machine shop.

Brunswick—Mattress and Soap Factories.—W. Huber will start a mattress factory and a soap factory.

Buchanan—Furniture Factory.—A. L. Morgan is building a furniture factory, and will start operations in the spring.*

Buchanan—Shingle Mill, &c.—A. L. Morgan has erected a shingle mill and a cotton gin.

Cartersville—Furniture Factory.—James Gilreath is erecting a furniture factory near Cartersville.

Crawfish Springs—Pencil Factory.—A company has been organized by S. T. Osburn and others to manufacture pencil cedar.

Cordele—Water Works.—The city will decide by a popular vote on December 14 whether or not to issue \$14,000 of bonds to build water works. The mayor can give information.

Forsyth—Cotton Factory, &c.—The Forsyth Manufacturing Co. will put additional machinery in its cotton factory and light the factory by electricity.

Gainesville—Gold Mining, &c.—The St. George Gold Mining Co., Limited, of London, Eng., will soon commence developing its property, consisting of 2,000 acres of mineral land in White county. A canal to miles long will be built to furnish water at a cost of about \$10,000, and contract has been let for the erection of a 20-stamp mill to Frank W. Hall, of Dahlonega, Ga. The company has a capital stock of \$300,000. H. H. Dean is local representative.

Gainesville—Mining.—The Dahlonega Co. has been organized, it is reported, in London, Eng., with a capital stock of £125,000 to develop mineral lands.

La Grange—Electric-light Plant.—An electric-light plant has been erected at the Southern Female College.

Macon—Furniture Factory.—E. J. Willingham will erect a two-story brick furniture factory, 100x25 feet. He will invest about \$25,000.

Macon—Canning Factory.—The Elberta Peach Co. has been incorporated by Robert Ober, of Baltimore, Md.; E. P. Mason, of Providence, R. I.; R. F. Lawton, A. Prondit and others to plant, raise and can fruits and vegetables. The capital stock is \$18,000.

Rome—Broom Factory.—Frank A. Wynn has

started a broom factory. He will put in more machinery.*

Savannah—Electric-light Plant.—Proposals for furnishing the electric-light plant for the city previously mentioned are invited until November 25 by Frank E. Rebarer, clerk of council.*

Savannah—Cotton Mill.—The Savannah Cotton Mill Co. has let contract to John R. Eason to rebuild its burned cotton mill previously reported.

Smithonia—Foundry and Machine Shop.—A foundry and machine shop are to be started soon. James M. Smith can give information.

Social Circle—Gin.—Gibson & Adams have rebuilt their cotton gin reported in this issue as burned.

Tallapoosa—Water Works.—Water works are reported to be built and correspondence with contractors is desired by the Tallapoosa Land, Mining & Manufacturing Co.

Tallapoosa—Iron Furnace.—The Tallapoosa Furnace Co. is pushing its charcoal iron furnace to completion, and states that iron will be made in 90 days.

Tallapoosa—Electric-light Plant.—It is reported that a company is being organized to erect an electric-light plant. The Tallapoosa Land, Mining & Manufacturing Co. can give particulars.

Tallapoosa—Knitting Factory.—Hall & Matthews state that a knitting factory is to be started.

Tunnel Hill—Iron Furnace.—It is reported that the Chattanooga Mining & Manufacturing Co., reported previously as opening mines, &c., will shortly contract for the erection of an iron furnace.

Washington—Oil Mill.—A cotton-seed oil mill is reported as to be built by next season.

KENTUCKY.

Bowling Green—Creamery.—D. J. Phillips, Dr. Woods, Luther Porter and others will probably organize a stock company to establish a creamery.

Brandenburg—Salt Works.—The Consolidated Gas Co. has struck a salt well of sufficient flow to make 60 barrels of salt per day and intend erecting salt works.

Clay City—Electric-light Plant.—The Kentucky Union Railway Co. (office, Louisville) will erect an incandescent-light plant of 800 lights capacity.

Cloverport—Machine Shops.—The Louisville, St. Louis & Texas Railroad Co. (office, Louisville) has let contract for erecting buildings for its machine shops, previously reported, to Bailey & Koerner, of Henderson.

Covington.—The Frisbie Engine & Machine Co. has been incorporated by L. Brooks, Bert Beard and James Beard. The capital stock is \$50,000.

Covington—Bridge.—The Cincinnati & Newport Bridge Co. will expend \$100,000 in improving its bridge. Work is to be started soon.

Danville—Flour Mill.—Funk & Anderson will at once rebuild their flour mill reported last week as burned. Capacity will be 75 barrels daily.

Falls of Rough—Saw Mill.—L. Green will build next season the saw mill reported last week. He will use water-power.*

Flemingsburg—Gas Works.—S. Salamon, of Paris, is preparing estimates for gas works.

Georgetown—Lead Mines.—A company is developing a lead mine on the farm of Dr. J. M. Viley near Georgetown. \$10,000 of machinery has, it is said, been put in place and shafts sunk.

Henderson—Natural Gas.—The Trenton Rock Gas Co. will sink nine more gas wells near Henderson, and build a pipe line to Henderson.

Henderson—Natural Gas.—The Henderson County Natural Gas, Mining & Manufacturing Co. has been incorporated by H. C. Dixon, O. W. Rash, Edward Atkinson and others to develop gas lands. The capital stock authorized is \$3,000,000.

Louisville.—The Bowling Green Contract Co. has been incorporated by William Matthews and others, probably to build the Bowling Green & Northern Railroad, previously mentioned. The capital stock is to be not more than \$500,000.

Louisville—Electric-light Plant.—The Louisville Gas Co. will probably erect a large electric-light plant.

Owensboro—Distillery.—The John Hanning Distillery Co., lately mentioned as putting in corn milling machinery, increased the capacity of its distillery to 80 barrels daily during the summer.

Petersburg—Corn Mill.—The Petersburg Milling Co., reported lately as purchasing corn mill machinery, has erected a 100-barrel roller mill.

Princeton—Woolen Mill.—The erection of a woolen mill is projected. The Secretary Board of Trade can probably give particulars.

LOUISIANA.

Grand Isle—Dredging.—The Grand Isle Railroad Co. contemplates dredging a channel to shorten route from its terminus on the Locola canal to Grand Isle.

Lake Charles—Sulphur Mine.—The American Sulphur Co., of West Virginia, has purchased the sulphur mines of the Louisiana Sulphur Mining Co. for \$300,000.

Calcasieu Parish—Timber Lands.—A. G. Van Schaick, of Chicago, Ill., has lately bought 35,000 acres of timber lands at about \$4 per acre. It will not be developed at once.

Kentwood—Box and Hoop Factory.—Stanford & Wootals are building the box factory reported last week, and are about putting in machinery. They will manufacture hoops also.

New Iberia—Electric-light Plant.—The erection of an electric-light plant is projected.

New Orleans—Sugar Refinery.—Claus Spreckles, of Philadelphia, Pa., lately mentioned as to build a sugar refinery, is reported in an interview as saying that his next place of building would be New Orleans, and that capacity of said refinery will be 1,000,000 lbs. per diem.

New Orleans—Gas Works.—L. E. Lemarie is interested in the company lately mentioned as to be organized to build works for the manufacture of fuel gas. He states that the company propose building a plant to cost \$2,000,000 if franchise is secured.

New Orleans.—The American White Lead & Color Co. will meet on November 25 to consider the increase of its capital stock.

Robeline—Saw Mill.—The erection of a \$20,000 saw mill is talked of.

Vidalia—Saw Mill.—The Natchez Construction Co., of Natchez, Miss., will erect a large saw mill on the Shields plantation.

MARYLAND.

Baltimore.—The Southern Engraving Co. has been incorporated by J. H. Roseman, Preston Fiddis, S. S. Jenkins and others with a capital stock of \$10,000.

Baltimore—Iron Works.—The Columbian Iron Works & Dry Dock Co. will put new and improved machinery in its works at Locust Point. It has just been awarded contract to build two 2,000-ton cruisers for the United States Government at \$1,225,000.

Baltimore—Can Factory.—Kilwan & Tyler, reported last week as enlarging their can factory, contemplate adding machinery for generating gas for heating purposes.

Bradshaw—Land, &c.—A Pennsylvania syndicate has purchased the property of B. F. Taylor for \$45,000, and intend laying off a town and secure the establishment of factories. Shute Bros., of Philadelphia, are said to be interested.

Cambridge—Packing-house.—The Baltimore Oyster Packing Association, of Baltimore, has started an oyster packing house and will probably soon enlarge it.

Centreville—Electric-light Plant.—The town authorities are considering putting in the electric-light plant referred to last week. Boiler power will be secured from water works nearly completed. W. F. Harman can give particulars.

Elkton—Wire Nail Works.—The Taylor Wire Nail Co., of Pittsburgh, Pa., has offered to move its works to Elkton if donated a site and from \$30,000 to \$40,000 of its capital stock is subscribed to by Elkton parties.

Frederick—Box Factory.—A party contemplates starting a factory for manufacturing cigar and tobacco boxes. Address Lock Box 461.

Frederick—J. H. Gambrell is putting a new grain separator in his flour mill.

Middletown—Iron Furnace.—A coke iron furnace is reported to be built.

Principio Furnace—Iron Furnace.—The George P. Whitaker Iron Co. has let contract for building an iron furnace to Gordon, Strobel & Laureau, of Philadelphia, Pa. It is probably a charcoal furnace.

Salisbury—Electric-light Plant.—The Salisbury Electric-light Co., reported last week as chartered, has plant in operation.

Sparrow's Point—Iron Furnace, Steel Plant, &c.—The Pennsylvania Steel Co. has blown in one of its four new iron furnaces previously mentioned. Capacity is about 250 tons daily. It is at work on the steel plant as lately stated, and has pattern shop nearly complete and is building foundry.

Taneytown—Flour Mill.—Zollickoff & Bro., reported last week as to build a roller flour mill, will put an electric light plant in same.

Washington, D. C.—Steam Heat.—Contract for furnishing and putting in place the steam heating apparatus for the new gun shops at the navy-yard has been awarded to Crook, Horner & Co., of Baltimore, Md., at \$7,082.05.

Washington, D. C.—Granite.—The Guilford & Waltersville Granite Co., of Baltimore, Md., has been awarded the contract for furnishing and delivering the cut granite for the court-yard of the Congressional Library Building, lately mentioned, at \$175,437.

Washington, D. C.—The Washington Title Insurance Co. has been incorporated at Alexandria, Va., with W. R. Woodward, president, and William Burie, secretary. The capital stock is to be \$500,000.

MISSISSIPPI.

Chatawba—Gravel Mining.—The Chatawba Gravel Co. will probably soon develop its gravel beds.

Friar's Point—Oil Mill.—It is stated that about \$60,000 have been subscribed towards organizing a stock company to build the cotton-seed oil mill previously mentioned as projected. A. B. Rozell can probably give information.

Greenville—Levee Work.—The Board of Mississippi Levee Commissioners, S. W. Ferguson, secretary, has let contracts for the following levee work to the parties named: E. Heyner, from Waxhaw to Harstin, 40,000 yards at 14 cents; below Rosedale, 3,370 yards at 18 cents; Melrose front, 10,000 yards at 16 cents; Storms front, 5,540 yards at 18 cents; Bolivar to Edmonds, 10,700 yards at 22 cents; Choctaw Bend levee, 33,260 yards at 17 cents. Easterling & Aldrich, Greenville to Warfields, 3,000 yards at 10 cents, and 17,000 at 15 cents. W. R. Harvy & Co., above Session's Gate, 30,260 yards at 17 cents; Riverton to Buleauigh, 29,260 yards at 6 cents. J. S. Gant, Bell front, 9,120 yards at 16½ cents. P. F. Lamb, Franklin's to Rowland, 21,880 yards at 16 cents.

Huntington—Machine Shops.—It is rumored that the Georgia Pacific Railroad Co. (office, Birmingham, Ala.) will build machine shops. It has bought 7 acres of land for depot purposes, &c.

Jackson—Kaolin Mine.—T. M. Miller will test a deposit of white kaolin with a view to its development.

Rosedale—Compress.—A cotton compress will probably be erected. Charles Scott can give information.

Rosedale—Oil Mill.—A stock company has been organized, with Charles Scott as president, to build a cotton-seed oil mill.

Vicksburg—Water Works.—The Vicksburg Water Supply Co. has let contract for rebuilding the tunnel lately mentioned to W. O. Gorman. The company will begin laying additional mains at once.

NORTH CAROLINA.

Addie—Pottery, &c.—A stock company is being formed to develop the clay beds controlled by Capt. J. A. Irvine, of Columbia, Tenn., and it is expected to erect a clay washer and a pottery soon.

Asheville—Lumber Mill.—The French Broad Lumber Co. will put two new boilers in its lumber mill and add a planer.

Asheville—Lumber Mill, &c.—The Asheville Lumber & Manufacturing Co. will make considerable improvements and additions to its lumber mill, and add a dry-kiln 70x17x9 feet.

Asheville—Flour Mill.—W. E. Logan is putting new machinery in his flour mill.

Durham—Electric-light Plant.—The Blackwell's Durham Co-operative Tobacco Co. has put an Edison incandescent electric-light plant in its tobacco factory.

Elkinsville—Saw Mill, &c.—Charles Chauncey contemplates rebuilding his saw mill and cotton gin, reported last week as burned, if he can purchase machinery on time.

Forestville—Paper Mill.—J. B. Brewer, of Murfreesboro, and S. W. Brewer, of Wake Forest, have purchased the Falls of Neuse Paper Mill and will thoroughly repair and operate it. A new water-wheel will probably be put in.

Greensboro—Foundry and Machine Shop.—The Eagle Foundry Co. is erecting a new building for its iron foundry and machine shop.

Henderson—Tobacco Factory.—Perry Bros. will not build their leaf tobacco factory mentioned last week before next spring.

Jacksonville—Saw Mill.—The Onslow Lumber Co., lately mentioned (under Swansborough) as erecting a saw mill, contemplates building such mill, but have not decided as to time and capacity.

Lexington—Electric-light Plant.—There is talk of putting in an electric plant for lighting the town. J. L. Peacock can give information.

Lexington—Brick-yard.—It is contemplated to start a brick-yard for manufacturing pressed brick. J. L. Peacock can give particulars.

Manchester—Planing Mill, &c.—The Star Lumber Co., reported last week as putting planer in lumber mill, has added a planing mill, dry-kiln, &c.

Murphy—Talc Mines.—S. L. Mautby and others will erect machinery to develop their Leatherwood talc mines and prepare the talc for market.

Raleigh—Oil Mill.—The Raleigh Oil Mill & Fertilizer Co. has put another new hydraulic press in its cotton-seed oil mill.

Wilmington—Cracker and Cake Factory.—B. L. Perry is forming a stock company to start a steam cracker and cake bakery at some point in North Carolina. Address care Cronly & Morris.

Wilmington—Bottling Works.—The Robert Portner Brewing Co., of Alexandria, Va., will erect bottling works and a cold-storage warehouse.

SOUTH CAROLINA.

Charleston—Iron Works.—Valk & Murdoch, operating foundry and machine shop, have incorporated as the Valk & Murdoch Iron Works. Capital stock is \$100,000. They are enlarging their

works, doubling capacity of iron foundry and boiler shop.

Columbia—Water Works.—The city is considering a proposition of the West Filtration Co., of New York city, to erect filtering apparatus at the water works. If anything is done the mayor can give information.

Columbia—Shoe Factory.—A stock company will probably be organized to enlarge and operate the shoe factory of A. C. Dibert in the State penitentiary.

Columbia—Electric-light Plant.—The Congaree Gas & Electric Co. has let contract for furnishing the incandescent light plant previously reported to be added to the Thomson-Houston Electric Co., of Boston, Mass.

Elloree—Furniture Factory.—William Wallace will probably enlarge his furniture factory.

Elloree—Artesian Well.—An artesian well will be sunk. W. Wallace can probably give information.

Keowee—Saw Mills, &c.—John Mitchell, of Marquette, Mich., and G. Wanner have purchased timber lands, and will build saw mills and construct a boom in Tugaloo river.

Union—New Town.—John S. Young is laying off a new town on the Georgia, Carolina & Northern Railroad.

TENNESSEE.

Bristol—Iron Furnace.—The Virginia Development Co., reported last week as organized (under Roanoke, Va.), will build an iron furnace at Bristol. A separate company will be formed.

Chattanooga—Land.—The East Chattanooga Land Co. has been bought out by New England capitalists for \$5,000,000. Property consists of 2,000 acres land adjoining the city and 1,500 acres of iron ore lands. W. K. Burton & Co. can give information.

Chattanooga.—The Invisible Hitching Post Co. has been organized with G. W. Ochs, president, and D. C. McMillin, secretary, to manufacture the hitching-post and block patented by E. S. Reed.

Chattanooga—Pumping Station.—The Chattanooga Water Co. will erect a pumping plant at the foot of Lookout mountain to supply the new Lookout Inn.

Chattanooga—Sewer.—J. A. Fairleigh, city engineer, will receive proposals until November 5 for constructing a brick sewer on Boyce and other streets.

Chattanooga—Ice Factory.—The Chattanooga Ice & Bottling Co. contemplates putting in a new ice machine of 40 tons capacity to increase capacity of factory to 65 tons daily.

Chattanooga—Oil Tanks.—The Tennessee Oil Co. is erecting two large oil tanks.

Chattanooga—Plow Factory, &c.—David Gibson has purchased a site and will soon erect a factory for manufacturing plows, wheelbarrows, &c.

Chattanooga.—The Southern Equipment Co. has been incorporated by J. R. Ryan, Frank Eastman, G. M. Chapman and others, to furnish railway, mining and lumbering equipments.

Columbia—Water Works.—Water pipes will be laid at the Columbia Arsenal for fire protection. Major Clifton Comley, ordnance department U. S. army, can give information.

Crossville—Mineral Lands.—S. P. Dodson and G. H. Jarnigin, of Chattanooga, have purchased a large tract of mineral land and intend, it is stated, developing.

Cumberland Furnace—Iron Furnace, &c.—The Southern Iron Co., lately mentioned (under Chattanooga) as purchasing several iron furnaces, mineral properties, &c., in Tennessee and Alabama, has also purchased the property of the Drouillard Iron Co. (office, Nashville), comprising about 17,000 acres of mineral and timber lands and a charcoal furnace, 37x9½ feet, built in 1825. Price was \$140,000.

Elizabethton—New Town, Mining, &c.—Clinton B. Fisk, of 95 Broadway, New York city; William Silverwood, of Baltimore, Md., and others, lately reported as purchasing mineral lands, have bought 300,000 acres of mineral, timber and agricultural lands and organized the East Tennessee Land Co., capital stock \$3,000,000, to develop same. They propose to mine coal, iron ore, &c., build up a manufacturing town to be called Harriman, establish summer and winter resorts, etc.

Gallatin—Lumber Mill.—Boone, Boyers & Co. are making efforts to secure the removal of a large lumber mill from West Branch, Mich., to Gallatin.

Jackson—Saw and Grist Mill.—E. J. Hurbert has erected a saw and grist mill near Jackson.

Kelso—Flour Mill.—O. J. Dundas, who lately purchased the flour mill of M. S. Esslick, is thinking of putting in roller machinery.

Monroe County.—The Belding Lumber Co. will construct a boom now, and when the Knoxville Southern Railroad is completed, erect several large saw mills at Niles' Ferry.

Murfreesboro—Water Works.—J. E. Thompson, of Manchester, will purchase the Murfreesboro Water Works and extend same. A stand-pipe 50 to 100 feet high will be built.

Nashville—Woolen Mill.—It is reported that Kentucky parties have purchased a site for the erection of a woolen mill next spring.

South Pittsburg—Electric-light Plant.—The South Pittsburg Electric Light & Power Co., reported last week as to add an incandescent plant, has let contract to the Thomson-Houston Electric Co.

Watertown—Flour Mill.—Bryan, Wood & Neal have purchased the machinery for their flour mill reported in last issue.

TEXAS.

Abilene—Elevator.—The Pioneer Mill Co., lately mentioned as contemplating building a grain elevator, will increase capacity of its elevator to 100,000 bushels.

Austin.—The White Rose Baking Powder Co. will shortly put in place machinery and commence manufacturing baking powder.

Beaumont—Electric-light Plant.—The Beaumont Ice, Light & Refrigerating Co. will add one engine and one incandescent dynamo to its plant.

Beaumont—Grist Mill.—J. K. Price and C. L. Nash will rebuild at once their grist mill reported in this issue as burned.

Bonham—Ice Factory.—There is talk of building an ice factory.

Brady—Grist Mill, &c.—Hans Peterson, of Georgetown, will erect the grist mill and cotton gin lately reported.

Denison—Carriage Factory.—L. B. Johns, of Abilene, Kansas, is considering the establishment of a carriage factory in Denison.

Denison—Rule Factory.—It is proposed to form a company to secure the removal from Buffalo, N. Y., of a factory manufacturing wooden and brass rules, and investigations are being made. The Denison Land & Investment Co. can give information.

Denison—Cotton Factory.—The Denison Cotton Manufacturing Co. has selected a site for its 25,000-spindle cotton factory previously reported as to be built.

Denison—Oil Mill.—A stock company will be organized to build a large cotton-seed oil mill. The Denison Land & Investment Co. can give information.

Denison—Sewerage System.—John McDonald, of Fort Scott, Kans., received the contract mentioned last week for constructing 12 miles of the Waring system of sewerage at \$47,487.90.

Denison—Carriage Factory.—A carriage factory is projected. The Denison Land & Investment Co. can give information if anything is done.

Fort Worth—Water Works.—The water works will be enlarged. The mayor can give particulars.

Fort Worth.—The Fort Worth Real Estate & Investment Co. has been organized by S. M. Fry, E. B. Harrold, R. A. Rogers and others. The capital stock is to be \$200,000.

Galveston—New Town.—The Galveston, Kansas & Colorado Land Co. has been organized. It has purchased 1,361 acres of land for a town to be laid out to be called West Galveston.

Galveston.—The Crystal Ice Co. has been incorporated with a capital stock of \$50,000 by Moses Freiberg, Samuel Klein, H. I. Kampman and others.

Hillsboro—Gin.—Schuyler & Crumley will rebuild their cotton gin reported in this issue as burned.

Houston—Cotton Mill.—Edwin E. Simpson, of 727 Walnut street, Philadelphia, Pa., offers to move his cotton mill, including a machine shop, to Houston, if given sufficient inducement. Capacity is 22,000 spindles and 823 looms.

La Grange—Water Works.—W. S. Robson and others have organized the La Grange Water Works & Electric Light Co. to build water works, &c. Proposals are wanted for constructing the water works.

Laredo—Cotton Factory.—Parties have made a proposition to build a \$100,000 cotton factory, which is being considered. Secretary Board of Trade can give information if anything is done.

Laredo—Foundry and Machine Shops.—St. Louis (Mo.) and local parties will erect an iron foundry and machine shops to cost \$50,000, and have been donated land. Capacity of foundry is to be 40 tons daily. Secretary Board of Trade can give information.

Laredo—Electric-light Plant.—The Laredo Improvement Co. will add machinery for arc and incandescent electric lighting to its electric power plant previously reported.

Morgan—Ice Factory.—James Moorhead, of Waco, reported last week as contracting to build water works, contemplates erecting a 4-ton ice factory also.

New Birmingham—Rolling Mills.—Two parties are negotiating to erect rolling mills. The New Birmingham Iron & Land Co. can give information if anything is done.

Pecos City—Publishing.—N. Van Horn and J. C. Bayne have commenced the publication of the News.

Shafter—Gold Mining.—Col. Smith, John Ross and R. Wright are each mining for gold.

VIRGINIA.

Charlottesville—Gas Works.—A new gas-holder will probably be put in the Charlottesville Gas Works.

Christiansburg—Iron Mines.—Northern capitalists have leased or bought, through B. R. Linkous and Dr. H. D. Ribble, several farms containing iron ore, and will develop if the ore is found in sufficient quantity.

Clifton Forge—Publishing.—W. H. H. Frenger will publish the Clifton Forge and Iron Gate Review.

Clifton Forge—Planing Mill.—A planing mill will be erected at Iron Gate. The Iron Gate Land & Improvement Co. can give particulars.

Danville—Nursery, &c.—The name of the stock company lately mentioned as incorporated by George S. Sartin, W. J. Dance and others for the cultivation of fruit, ornamental and shade trees, etc., is the Danville Nursery & Greenhouse Co. It has purchased land and let contract for the building of greenhouses, etc.

Graham—The Graham Land & Improvement Co., reported last week as being organized to build up a manufacturing town, will have \$200,000 capital stock. A. J. May can give information.

Graham—Tannery.—A steam tannery is to be started. The Graham Land & Improvement Co. can give information.

Graham—Lumber Mill.—The name of the company reported last week as being organized to build a lumber mill is the Virginia Lumber Co. Capital stock is \$50,000.

Graham—Iron Furnace.—The iron furnace lately mentioned as to be built, and for constructing which James P. Witherow & Co., of Pittsburgh, Pa., have the contract, will be owned by the Graham Furnace Co. Capital stock is \$200,000.

Grayson County.—Northern capitalists have purchased the Grayson sulphur spring and will, it is reported, purchase the bromo, iodine and arsenic springs and make extensive improvements.

Holladay—Sulphur Mine.—Charles Lennig & Co., of Philadelphia, Pa., have sold their sulphur mines to an English company who will build at Norfolk large works for manufacturing chemicals, fertilizers, &c. They also sold a graphite mine to same parties. Sulphur mines will be developed.

Ivanhoe Furnace—Iron Mines.—Charles A. Crozier, probably of Roanoke, has consummated the purchase of the Chatwell iron ore property on Cripple creek from George Simmerman at \$100,000. It will be developed.

Luray—Tannery.—Deford & Co., of Baltimore, Md., have put 4 new boilers in their tannery, and increased capacity near 50 per cent.

Lynchburg—Factory.—Parties are negotiating with the Lynchburg Land Co. to locate an extensive manufacturing plant.

Lynchburg—Iron Furnace.—The Virginia Development Co., of Philadelphia, Pa., will be interested in the \$200,000 company lately reported as being organized to build an iron furnace at West Lynchburg.

Max Meadows—Iron Furnace.—The Max Meadows Iron Co. is the name of the company reported last week as being organized to build an iron furnace. The capital stock is not to be less than \$100,000. George A. Clark, of Philadelphia, Pa., is interested.

Max Meadows.—The name of the land and improvement company reported last week as formed is the Max Meadows Improvement Co. The capital stock is not to be less than \$100,000. George A. Clark, of Philadelphia, Pa., can give particulars.

Norfolk—Chemical and Fertilizer Works.—The English company reported in this issue as purchasing sulphur mines at Holladay intend to build works at Norfolk for manufacturing chemicals, fertilizers, &c. Charles Lennig & Co., of Philadelphia, Pa., can give information.

Portsmouth—Machine Shops.—The Atlantic & Danville Railroad Co. (office, Norfolk) is about commencing the removal of its machine shops from Bellfield to Portsmouth, previously reported.

Radford—Tannery.—A steam tannery is to be started. The Radford Land & Improvement Co. can give information probably.

Richmond.—The Frogless Switch Co. has been incorporated by J. T. Odell, C. W. P. Brock, H. T. Wickham and others to manufacture railway switches, &c. The capital stock is to be not less than \$100,000 nor more than \$2,000,000.

Roanoke—Implement Works.—A \$10,000 stock company is reported as to start agricultural implement works. The Roanoke Land & Improvement Co. can give information.

Roanoke—Iron Foundry.—An iron foundry is reported to be started by a \$10,000 stock company. The Roanoke Land & Improvement Co. can give particulars.

Roanoke.—The Southwest Virginia Real Estate & Investment Co. has been incorporated with Clarence M. Clarke, president, and Arthur T. Dennison, secretary and treasurer, both of Philadelphia, Pa. The capital stock is to be not less

than \$25,000 nor more than \$1,000,000. Mr. Clark's address is Bullitt Building, Philadelphia.

Roanoke—Land.—A land company has been organized with P. L. Terry, president; J. H. Sands, vice-president, and S. W. Jamison, secretary and treasurer. It has purchased and will develop the McClanahan tract of 1,100 acres of land. The capital stock is to be not less than \$100,000 nor more than \$500,000.

Roanoke—Rolling Mill.—The Roanoke Rolling Mills, reported lately as to increase capacity of rolling mill to tons daily, will increase capital stock for that purpose.

Roanoke—Machine Works.—It is reported that the Roanoke Machine Works will build an addition to their works.

Roanoke—Bridge Works.—The American Bridge & Iron Co. is adding to its works an iron foundry 75x100 feet, with pattern shop. It has lately added some machinery to plant.

Tazewell C. H.—Rolling Mill, &c.—The Clinch Valley Coal & Iron Co. will next year build a rolling mill in western part of Tazewell county; also mine coal, manufacture coke and probably lay out a town.

WEST VIRGINIA.

Barnesville—Woolen Mill.—The Barnesville Manufacturing Co. contemplates enlarging its woolen mill.

Bethany—Oil Wells.—Three oil wells are being drilled near Bethany. Col. A. Campbell can give information.

Charleston—Pipe Line.—William S. Edwards and others have asked for the right to lay pipes for furnishing natural gas in Charleston.

Clarksburg—Wood-working Factory.—A company headed by M. M. Bradford will build the mill lately mentioned. It will be a general wood-working mill.*

Clifton—Land.—Hon. R. S. Brown, of Ravenswood, has purchased about 1,000 acres of coal and mineral lands from the Ohio & West Virginia Mining & Manufacturing Co. for \$17,780.13.

Colfax—Oil Wells.—The Marion Improvement Co. will sink a number of oil wells. L. M. Jenkins, of Pittsburgh, Pa., is largely interested in the company.

Fairmont—Coke Ovens.—50 more coke ovens are being built at the Gaston Coal & Coke Works.

Huntington—Coal Mine.—Tucker Wilkes is opening a coal mine two miles south of Huntington.

Mannington—Oil Wells.—Burt's Sons will probably sink oil wells.

Mannington—Pipe Line.—A pipe line for natural gas is to be built to Fairmont and Clarksburg, probably by Gibson & Co.

Mannington—Oil Wells.—The South Penn Co., Ira Dewitt, Gibson & Co. and F. M. Jackson & Co. are sinking oil wells.

Mohler's—Marble Mill.—A mill for sawing marble will be erected.

Morgantown—Oil Wells.—The Alexander Oil Co. will sink a number of oil wells.

Morgantown—Glass Factory.—G. W. McGraw, of Tarentum, Pa., has made a proposition to erect a 6-pot glass factory.

New Cumberland—Electric-light Plant.—The name of the stock company reported in last issue as being organized to erect an electric-light plant is the New Cumberland Light, Heat & Power Co. Albert Haigh, R. E. Lindsay, H. McMahon and others are incorporators. The authorized capital stock is \$50,000.

Parsons—Saw Mill.—Mr. Waggoner, of Steubenville, Ohio, will erect a saw mill soon.

Pleasant Valley—Grist Mill.—J. W. Chambers is erecting a grist mill.

Quinnimont—Coke Ovens.—Hutchinson Bros. are building 30 new coke ovens at their Beechwood mines.

Rowlesburg—Lead Mines.—J. E. Gallaher has organized a stock company to develop lead mines.

Shinnston—Coke Ovens.—The Upper Monongahela Coal & Coke Co., of Fairmont, previously reported as building a large number of coke ovens, will build a plant of ovens 4 miles from Shinnston.

BURNED.

Atlanta, Ga.—The Georgia Electric-light Co.'s works damaged by fire.

Beard's Bluff, Ga.—The turpentine distillery of G. Moody.

Beaumont, Texas.—The grist mill of J. K. Price and C. L. Nash; loss on machinery \$2,000. Will be rebuilt at once.

Blossom, Texas.—The grist mill and cotton gin of Brewer & Jones; loss about \$5,500.

Bogue Chitto, Miss.—The dry-kiln of the Keystone Lumber Co., 8 miles east of Bogue Chitto.

Boydton, N. C.—The printing office of the Clipper Publishing Co.

Carter, S. C.—The saw mill and cotton gin of Henry Crosby, near Carter, damaged by a boiler explosion.

Charlotte, N. C.—The planing mill of A. H. Crowell; loss about \$2,100.

Chilton, Ala.—The dry-kiln of the Chilton Lumber Co.

Fairview, W. Va.—The tannery of C. Gretsinger.

Flat Rock, Ga.—The saw mill and cotton gin of M. M. Bowden; loss \$2,000.

Gorman, W. Va.—The saw and planing mills of W. A. Barrett, Jr., & Co., at Barrett's Switch; loss about \$8,000.

Hot Springs, Ark.—Brown's saw mill, on the Ouachita river, five miles south of Hot Springs.

Lockville, N. C.—The foundry and machine shop, saw mill and cotton gin of Luke Bros.; loss \$6,000. They are thinking of rebuilding.

New Orleans, La.—The cotton wadding factory of Louis Schallert; loss \$4,000.

Point Pleasant, W. Va.—The tannery of D. S. Snyder; loss about \$4,000.

Selma, Ala.—The hotel of W. B. Gill; loss \$50,000.

Seville, Ga.—The saw mill of Hill Bros. damaged by a boiler explosion.

Summerville, S. C.—The saw mill of John Boyle.

Talladega, Ala.—The grist mills and cotton gins of M. M. Duncan and F. M. Howell.

Tampa, Fla.—The cigar box factory of A. A. Woods; saw mill of the Tampa Lumber Co., and the machine shops of the Tampa Street Railway Co.

The cotton gins of John H. Morrison, 4 miles from Concord, N. C.; Gibson & Adams, Social Circle, Ga.; T. Sheppard, Uniontown, Ala.; A. S. Smith, Wadley, Ga.; Lord & McMullen, Commissioner, Ga.; Mrs. E. Cromwell, near Tarborough, N. C.; Robert Barron, Macon, Ga.; W. J. Hutchison, in Caddo parish, La.; M. V. Kennedy, near Tyler, Texas; Rodgers & Laret, Orrville, Ala.; Noah Tarver, Waynesboro, Ga.; J. C. Schumpert, New Berne, N. C.; S. E. White and B. Springs, Fort Mill, S. C.; M. L. Gramling, near Orangeburg, S. C.; E. S. Roberts, Whitesburg, Ga.; J. W. Lovett, near Selma, Ala.; Asberry Hinson, Troy, Ala.; Johnson & Jones, Eureka, Texas; Mrs. H. Kitchings, 16 miles from Aiken, S. C.; Samuel Taylor, near Winchester, Ark.; John Hope, 15 miles from Albany, Ga.; Mr. Faulkner, 7 miles south of Hillsboro, Texas; George V. Weaver, 7 miles from Little Rock, Ark.; on the Wells place, Rayville, La.; M. M. Bowden, near Columbus, Ga.; J. N. Parker, near Camden, Ark.; J. M. Breeden, Bennettsville, S. C.; D. H. S'ocum, near Macon, Ga.; W. R. Brown, Marshallville, Ga., and Schuyler & Crumley, Hillsboro, Texas, have been burned. The last-named parties will rebuild.

FERTILIZER FACTORY—EUFULA, ALA., Oct. 24, 1889.—Have just organized here "The Chattanooga Fertilizer Co." Capital \$10,000, all paid in. W. N. Reeves is president. Will manufacture a perfect fertilizer after formula of State chemist. W. W. R.

ENLARGING IRON WORKS—CHARLESTON, S. C., Oct. 28, 1889.—Valk & Murdoch will be incorporated as Valk & Murdoch Iron Works. All stock engaged. We are at present engaged in enlarging works—doubling capacity of foundry and boiler shop. X.

ENLARGE IRON WORKS.—ROANOKE, VA., Oct. 28, 1889.—We are building a foundry to accommodate our furnace building business, etc. Foundry building is 75x100 feet, equipped with pattern shop, etc. Have recently added several new machines for bridge building and furnace work. AMERICAN BRIDGE & IRON CO.

A BIG COMPANY TO DEVELOP COAL LANDS—RICHMOND, VA., Oct. 28, 1889.—Consolidated Warrior Coal Co. was incorporated October 25 for the purchase, improvement, development and sale of mineral and coal lands in Virginia and Alabama. Capital stock is to be not less than \$1,000,000 nor more than \$2,000,000. Directors are Jos. F. Johnston and E. W. Rucker, Birmingham, Ala.; W. J. Behan, Sam. H. Buck and E. T. Manning, New Orleans, La.; F. A. Gamble, Jasper, Ala.; L. B. McFarland, Memphis, Tenn., and Ro. L. Traylor, Richmond, Va. Office, Richmond, Va., and Birmingham, Ala. Ro. L. TRAYLOR.

LARGE FOUNDRY AND MACHINE WORKS—LAREDO, TEXAS, October 23, 1889.—The city council to-day accepted the proposition of St. Louis and local capitalists to erect large foundry and machine shops at Laredo, and gave seven blocks of land valued at \$15,000 as site for erection. The foundry company gave a \$10,000 bond to commence work within thirty days, and to have a \$50,000 plant in operation within eight months. The buildings will be constructed of iron and brick, with a capacity of forty tons of castings per day, employing 100 men. A proposition to erect a \$100,000 cotton factory was also submitted, and committee appointed to confer and report at next meeting. The city council withdrew all the unsold city property, valued at \$100,000, off the market, in order to donate some to manufacturers which will locate at Laredo.

THE LAREDO BOARD OF TRADE.

Building Notes.

Anniston, Ala.—Dr. Mann will build a four-story school with a frontage of 265 feet if donated a site. George M. Pollard prepared the plans.

Anniston, Ala.—A \$10,000 parsonage will be built for the Parker Memorial Church, lately mentioned as erecting a new edifice.

Asheville, N. C.—Dr. Karl Von Ruck has leased the Sulphur Springs Hotel and property, from the West Asheville Improvement Co., who will build an addition to the hotel three stories, 128x42 feet, take out old and put in new plumbing, also heating apparatus for 125 rooms, passenger and freight elevators, &c. He will build a street railroad also, and establish a park.

Asheville, N. C.—Dr. Walter C. Browning, of Philadelphia, Pa., is organizing a stock company to build a large sanitarium.

Augusta, Ga.—Lewis F. Goodrich, architect, will receive proposals until November 4 for rebuilding the Augusta Orphan Asylum, previously reported. It is to be of brick, five stories, 165x50 feet.

Baltimore, Md.—J. T. Oster, inspector of buildings, will receive proposals until November 7 for the erection of a building for English-German School No. 5.

Baltimore, Md.—The North Baltimore Passenger Railway Co. will probably build new stables.

Baltimore, Md.—The National Marine Bank will erect on the site of its present structure a four-story stone building 50x90 feet.

Baltimore, Md.—Charles Miske will erect 12 two-story houses on Madeira alley.

Baton Rouge, La.—The Baton Rouge Fair Association will erect a number of buildings, construct race track, &c.

Blowing Rock, N. C.—Hotel.—The Arlington Hotel Co. has been organized to build a hotel to cost \$26,000. This is possibly the hotel previously mentioned as probably to be built by J. M. Bernhardt.

Brunswick, Ga.—Hotel.—It is reported that Atlanta parties will build a large brick hotel.

Camden, Ark.—Varner Bros. have received contract to build the hall for the Knights of Pythias, previously reported, at \$13,000.

Carrollton, Ga.—The grand jury recommends the erection of a new courthouse for Carroll county.

Carthage, N. C.—The Moore county courthouse lately burned will be rebuilt at a cost of \$7,000. The county clerk can give particulars.

Chattanooga, Tenn.—C. H. Peabody will erect a \$5,000 building on McCallie street.

Chattanooga, Tenn.—The Third National Bank building will be remodeled at a cost of about \$12,000. H. C. Jackson has the contract.

Chattanooga, Tenn.—It is reported that E. C. Carpenter, of Brattleboro, Vt., will erect a building on Seventh street, 30x100 feet.

Chattanooga, Tenn.—H. F. Temple will erect a \$7,000 residence. R. H. Hunt prepared plans.

Columbia, Tenn.—Major Clifton County, U. S. A., will receive proposals until November 26 for erecting barrack and other buildings for the Columbia arsenal. Particulars can be had on application. Amount appropriated for actual construction is \$200,000.

Crystal Springs, Miss.—A \$10,000 schoolhouse will be built. The mayor can give particulars.

Denison, Texas.—The East Side Building & Loan Association has been incorporated by William Holmes, T. W. Styles, C. H. Wood and others.

Florence, Ala.—The Lauderdale Club has let contract to J. C. Jones for building its new clubhouse previously reported. The cost will be \$9,000 without furnishings.

Fort Worth, Texas.—W. J. Bailey will erect 4 brick stores on Houston street.

Fort Worth, Texas.—Depot.—The St. Louis, Arkansas & Texas Railroad Co. (office, St. Louis, Mo.) will build a new passenger depot.

Fulton, Ky.—The Farmers' Tobacco Bank will erect a bank building and have let contract.

Gainesville, Fla.—Hotel.—It is reported that Eastern capitalists will build a fine hotel.

Graham's Turn Out, S. C.—The People's Bank will erect a bank building.

Halifax, N. C.—Hotel.—J. H. Halliston, of Dakota, has purchased the Southern Hotel, and will make improvements as lately mentioned.

Harper's Ferry, W. Va.—Hotel.—C. G. Green, of Baltimore, Md., is building a hotel 160x40 feet on the Green farm, across the Shenandoah river. John McArthur is the contractor.

Harrodsburg, Ky.—The Dean-Field Coal Co., of Owensboro, will build 20 houses at the new town of Miller's Station.

Hillsboro, Texas.—J. G. Abney, county judge, will receive proposals until December 12 for building the new courthouse previously mentioned. The estimated cost is \$85,000. W. C. Dodson, of Waco, prepared plans.

Huntington, W. Va.—Robert T. Harvey will rebuild his three-story block recently burned.

Jackson, Miss.—The Baptists will build a new church to cost \$30,000.

Leesburg, Va.—A new edifice will be erected for St. James Episcopal Church.

Nashville, Tenn.—Hotel.—I. Johnson and I. C. Witt contemplate building a new hotel next spring.

Natchez, Miss.—The Natchez, Jackson & Columbus Railroad will build a new passenger depot.

Ocala, Fla.—Mr. Malyvan has organized a company to erect a storage warehouse 60x210 feet.

Owensboro, Ky.—Dr. W. B. Armendt will erect a store and office building.

Petersburg, Va.—Hotel.—C. F. Hall, of Indiana, has purchased the Bollingbrook Hotel and will remodel it. An elevator will be put in.

Pine Bluff, Ark.—Contract for remodeling the Jefferson county courthouse, previously reported, has been let to W. J. Hilliard. E. Cooke is the architect. Work will be started at once.

Portsmouth, Va.—N. B. Ridley, W. H. Stewart and others are organizing a branch of the American Building & Loan Association.

Raleigh, N. C.—A branch of the Southern Building & Loan Association has been organized with H. B. Battle, president, and J. M. Sherwood, secretary and treasurer.

Savannah, Ga.—Plans have been prepared and contract will be let soon for the rebuilding of the Independent Presbyterian Church, previously reported. George N. Mills can give information.

Sheffield, Ala.—The Board of Public Works will receive proposals until November 25 for building the city hall previously reported. Thomas C. Veale, of Chattanooga, Tenn., prepared plans. It is to cost not more than \$30,000.

Sylva, N. C.—Hotel.—It is reported that the Equitable Co. will build a hotel.

Tampa, Fla.—Hotel.—Mr. Le Duc has purchased a site 70x105 feet on which to build a hotel.

Taylor, Texas.—The new school building previously reported as to be erected will cost about \$30,000. The mayor can give information.

Washington, D. C.—Edwin Temple will erect 6 dwellings and a store to cost \$5,500; R. A. Phillips, 5 buildings to cost \$7,500; C. A. McEuen, a \$6,000 building on G street; George E. Lemon, 2 two-story stables, 30x55 feet each, to cost about \$15,000; Mrs. P. P. Mullett, 3 three-story dwellings to cost \$36,000, and E. F. Davis, a \$5,000 dwelling.

Washington, D. C.—Architect Von Nerta will probably prepare plans for about 50 dwellings to be built in Northeast Washington by a syndicate at a cost of \$200,000.

Wheeling, W. Va.—Anton Reyman contemplates erecting a six-story hall and store building.

West Point, Miss.—Hotel.—The erection of a large hotel is talked of.

Wilmington, N. C.—The Armour Packing Co., of Chicago, Ill., represented by Jesse Harkness, will erect a cold-storage and office building to cost \$10,000.

Wylie, Texas.—A college building will be erected.

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Boiler.—The Cape Fear Shingle Co., Jonesboro, N. C., wants a 40 horse-power locomotive boiler with all fixtures. A good second-hand one will do.

Boiler and Engine.—T. E. Wallace, Wilmington, N. C., wants a second-hand boiler and engine of about 15 horse-power.

Boiler and Engine.—H. J. Johnson, Hollywood, Ala., wants an 80 horse-power boiler and engine.

Box Machinery.—Information regarding machinery necessary for making cigar and tobacco boxes; also cost of labels, and information about cedar for making same, is wanted by Box Factory, Lock Box 461, Frederick, Md.

Brick Machinery.—J. L. Peacock, Lexington, N. C., wants information as to cost, capacity, &c., of machinery for manufacturing pressed brick.

Broom Machinery.—Frank A. Wynn, Rome, Ga., wants address of manufacturers of broom machinery and broom handles and dealers in broom-corn, wire, twine, broom hardware, &c.

Builders' Supplies.—O. J. Hinkley, Talladega, Ala., wants prices on doors, sash, blinds and builders' supplies.

Cars.—D. A. Miller, secretary Ocala Street & Suburban Railroad Co., Ocala, Fla., wants prices and catalogues of light cars, new and second-hand.

Cells.—Bids for putting four new cells in the jail Orlando, Fla., are invited until December 2 by B. F. Whitner.

Corn Mill.—J. F. Turner, Dadeville, Ala., wants to buy a corn mill.

Corn Mills.—William Allan, Huntsville, Ala., wants for customer two or three 36-inch upper runner portable corn mills, the stones of sharp-cutting grit similar to the North Carolina millstone grit, and a small band saw and small emery wheel fit to mandrel, with boxes and pulley complete.

Corrugated Iron, &c.—J. H. Edward, Johnston, S. C., wants to correspond with parties who furnish materials for brick and corrugated iron warehouse.

Cracker Bakery, &c.—B. L. Perry, care Cronly & Morris, Wilmington, N. C., wants information as to cost of machinery for steam cracker and cake bakery.

Electric-light Plant.—Frank E. Rebarer, clerk of council, Savannah, Ga., will receive bids until November 25 for furnishing the entire plant necessary for supplying 300 arc lamps of 1,000 candle-power, or its equivalent (either wholly or partly) of incandescent lights.

Electric-light Plant.—J. L. Peacock, Lexington, N. C., wants information as to electric-light plants for street lighting.

Electric Plant.—Zollickoff & Bro., Taneytown, Md., want an electric-light plant for flour mill to be built.

Excelsior and Tooth-pick Machinery.—G. E. L., care MANUFACTURERS' RECORD, Baltimore, Md., wants price-lists and catalogues of excelsior and tooth-pick machinery and information in regard to the business.

Farming Implements, Vehicles, &c.—J. H. Edward, Johnston, S. C., wants to correspond with manufacturers of farming implements, vehicles, &c. They are to be purchased in quantities for Farmers' Alliances.

Fire Engines.—The city of Fort Worth, Texas, will purchase new fire engine. The mayor can give particulars.

Flour Mill.—Zollickoff & Bro., Taneytown, Md., want boiler, engine and other machinery for a roller flour mill.

Furniture, &c.—R. D. Murray, surgeon, Marine Hospital service, Key West, Fla., will receive proposals for supplying furniture, linoleum, curtains, etc., for the Marine Hospital.

Furniture Factory.—A. L. Morgan, Buchanan, Ga., wants belting, shafting, pulleys and all machinery for a furniture factory.

Gas Machinery.—Kirwan & Tyler, Baltimore, Md., want to purchase machinery for generating gas for heating purposes at their can factory.

Grist Mill.—Price & Nash, Beaumont, Texas, want a full grist mill outfit, except boiler and engine.

Hoisting Machinery.—Jacob Lindley, Melvale, Md., wants to purchase portable hoisting machinery.

Ice machine of 4 tons capacity is wanted by James Moorhead, Waco, Texas.

Iron Pipe.—Engineer Ellis, of the Jacksonville (Fla.) Water Works, will receive bids for furnishing four-inch iron pipe.

Iron Bridges.—The board of county commissioners, Cumberland, Md., will receive proposals until November 1 for building a wrought iron Pratt truss bridge, 85 feet in length, across George's creek, and a 56-foot Pratt truss bridge across the same creek. Proposals for one stone abutment and coping are also wanted.

Lathe.—Emerson McDuffie, Marion, S. C., wants prices on a 60-inch pulley lathe.

Mattresses.—John Vansant, surgeon, Marine Hospital service, Mobile, Ala., will receive proposals for furnishing hair mattresses and toilet sets for the Marine Hospital service.

Oil Refinery.—E. P. Turner, Griffin, Ga., wants to correspond with manufacturers of machinery for refining oil.

Paper Houses.—G. S. Claiborne, Nashville, Tenn., wants address of any parties manufacturing paper for the entire building of houses. Address care John B. Everett.

Plows.—J. M. Parker, Barcheers, Tenn., wants prices on a Hill side turner and a Sulky plow.

Pulp Machinery.—John C. Porcher, Monck's Corner, S. C., wants address of manufacturers of wood pulp; also information concerning the business.

Railroad Materials and Equipment.—The St. Albans & Coal River Railroad Co., St. Albans, W. Va., wants rails, engines, cars, bolts, spikes and all such materials for railroad.

Revolvers.—The Ordnance Department, Washington, D. C., will receive proposals until November 8 for furnishing 2,000 Colt's revolvers, calibre 45.

Saw Mill, &c.—L. Green, Falls of Rough, Ky., wants turbine water wheel and other machinery for a saw mill to be built next season.

Stand-pipe, Pipe, &c.—J. E. Thompson, Manchester, Tenn., will buy a stand-pipe 50 to 100 feet high, some pipe, &c., to enlarge water works at Murfreesboro.

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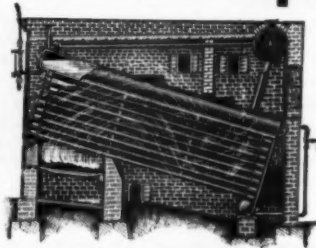
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Steam-heating Apparatus.—Lieut. Robert R. Stevens, A. A. Q. M., U. S. A., Hot Springs, Ark., will receive proposals for furnishing and putting in place steam-heating apparatus for army and navy general hospital.

Valves, Tool Steel, &c.—James Fulton, paymaster general United States navy, Washington, D. C., will receive proposals until November 21 for furnishing and delivering at the Norfolk (Va.) navy-yard 12 globe valves, 1 test gauge, 490 lbs. tool steel, 500 lbs. white and red lead and a quantity of pipes, fittings, copper tubes, washers, etc.

Water Pipe, &c.—Major Clifton Comly, United States army, Columbia, Tenn., will receive proposals until November 11 for the construction of a railway switch and for furnishing and laying water pipe with fire hydrants at the Columbia arsenal. Particulars given on application.

Water works are proposed at Tallapoosa, Ga., and the Tallapoosa Land, Mining & Manufacturing Co. wants to correspond with contractors.

Water Works.—The La Grange Water Works & Electric-light Co., La Grange, Texas, wants bids for building its water works. Address W. S. Robson for particulars.

Wells.—Nelson Tift, Albany, Ga., wants to correspond with parties who contract to bore artesian wells. Depth desired is 600 or 800 feet.

Wood-working Machinery.—J. F. Turner, Dadeville, Ala., wants 50 horse-power boiler, 30 horse-power engine, wood planer and machinery for manufacturing spokes, handles, well buckets, wheelbarrows, &c.

Wood-working Machinery.—M. M. Bradford, Clarksburg, W. Va., wants to buy a general line of wood-working machinery.

Woolen Mill.—J. F. Busbank, Cedartown, Ga., will want boiler and engine and other machinery for a woolen mill.

Wool-scouring Machinery, &c.—J. Moorhead, Waco, Texas, wants prices on wool-scouring machinery, wringers and turbine water wheels.

SHOPS TO BE BUILT—KNOXVILLE, TENN., Oct. 23, 1899.—The Memphis & Charleston will commence erection of shops in Sheffield soon.

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HENRY FINK, Vice-Pres.

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HEADQUARTERS
MANUFACTURERS' RECORD'S
EXPLORING EXPEDITION,
BIG STONE GAP, VA.,
October 28, 1889.

If you desire to visit the interesting, and now famous, Big Stone Gap region, and to reach that El Dorado by rail, the alternative is presented of taking the East Tennessee, Virginia & Georgia line to Bristol—or staying at home. A year from now the traveler may perchance have choice of several roads, but for the present the old reliable E. T. V. & G. is the only inlet.

Bristol is the eastern end of the system, and, as if to signalize that fact, it is a town of peculiar pretensions and phenomena. We have witnessed the idiosyncracies of Jellico, situated a-straddle of Kentucky and Tennessee; Bristol is much the same, only much more so. If one wants to write a letter to a friend in Bristol, it is quite indifferent whether he addresses it "Bristol, Tennessee," or "Bristol, Virginia." The main business street of the city is in one of these States on the east side and in the other on the west. There are saloons on the Tennessee side of Main street, while the Virginia sidewalk is free from signs which tempt the youth of the country to forget their total abstinence teachings. Only a few weeks ago a young and blushing Virginia maiden ran away from her parental mansion and came to Bristol to meet the object of her affections—with a general view to matrimony without cards. An infuriated *pater* wired for police interference, the young lady being under legal age. Constabulary intervention was furnished and Law dressed in blue coat and brass buttons politely interviewed the intending bride at an hostelry on the Virginia side of town, about a square from the dividing line. Pretty little miss was requested to accompany the officer to the railway station; but it appears that Eros has legs as well as wings and sighs, and it occurred to the fair prisoner to use hers. They proved to be a better pair than the policeman owned, and his mortification was intense when in about a minute by the Court House clock his quarry was across the street and safe in Tennessee.

Pardon this digression, which is neither scientific nor mineral, but we are getting into a new and interesting country and it is desirable that we should get our geography straight at the start. Well then, Bristol is on the State line and is a lively town of 8,000 or 10,000 people. A thriving town it is with an interior commerce derived from both mountain and valley country, much stimulated just now by the construction of the Ohio & South Atlantic Railway, whose Southern terminus is here.

Among the many railway lines now building into the mountains of coal and iron that go to make the Cumberland Mountain region one of the most valuable and promising of America's industrial resources, the Ohio & South Atlantic deserves particular consideration. At its head is the gentleman who was pioneer of the Eastern Kentucky Railway; who kept that enterprise up during periods when almost anybody else would have dropped it like a hot potato, and who has fought the matter long enough to command success both for his old and his present project. I mean of course General F. E. Bates. With plenty of backing from capital and aided by an excellent technical staff, he is making a demonstration that will not only tap the Big Stone Gap region,

but connect the Ohio river and valley with Virginia and tidewater before anyone can realize what is being done.

Cumberland Gap and Big Creek Gap are Kentucky and Tennessee affairs. Now we have a first-class gap to consider which is all in the grand old State of Virginia. To fully appreciate this fact it is only necessary, at this writing, to go as far as Bristol. General Mahone was stumping there, and at the Gap, only a short time ago, and his democratic opponents have been mass-meeting it still later. The caloric character of political feeling would tell one plainly that he must be in Virginia, even if he had never seen a geography. In fact there seem to be a great many politics in Virginia.

Perhaps the foregoing would not appeal so prominently to the average understanding, were it not usually necessary to remain in Bristol over night, because the Ohio & South Atlantic train leaves there for the Gap—or the nearest railway point to the Gap—at nine in the morning. It should be noted that on the West side of Main street everything is done according to Central time, while on the East side Eastern time is the rule. Consequently when it is nine o'clock on one side of town, it is ten o'clock on the other. This is providential in furnishing an infinity of excuses for the violation of business engagements. Something of the same sort would be a positive boon to Birmingham, where people never think of keeping an engagement on time, and where, there being no excuse as a rule, an excuse is seldom offered.

We take the train on the nine o'clock side of town and start, loaded to the guards as one might say. The travel toward Big Stone Gap is very large. There are contractors and daily contingents of their men going and coming. There are land prospectors, railway officials, officers of the Gap corporations, adventurers and tourists, until no well-regulated and self-respecting train of cars can hold them all comfortably—and away we steam into the eternal hills.

The ride from Bristol to Clinchport, on the Clinch river, and the nearest railway point to the Gap, is only a matter of about three hours, and these are well spent in a glance over the country traversed. Here and there, all along the line, promising hamlets are springing up, while there is every evidence that the agricultural, dairy and other resources of the lower points on the road are destined to afford it a handsome tonnage before long.

The train pulls up at Clinchport about noon. A good hearty dinner at the tavern there lines the investigator's ribs, so that he is ready for the twenty-two miles of travel by hack, horse or mule, which are still requisite to bring him to his journey's end. For our part we did justice to cold beef, potatoes and cold slaw and took mules. A handsome grey animal fell to my humble share. She was a female mule and I named her "Dame Trot," that being the only gait she was capable of. She could get over the ground much faster than ever I expect to get over the jolting of that and the succeeding days. As a specific for liver troubles and a substitute for dyspepsia tablets and Hunyadi water give me a hard trotting mule every time.

Two miles out of Clinchport on the road to the Gap is the noted natural tunnel 900 feet long through one of the mountains. Years ago Harpers Monthly published an account of this wonderful freak of nature, and quite lately Mr. Young E. Allison has described the same with a facility hard to imitate. The tunnel is as far ahead of the Natural Bridge as that curiosity is ahead of an ordinary railway culvert. As both are in Virginia I trust that this statement may not get us in trouble. For present purposes the interest of the natural tunnel lies in the fact that it is only needful to do a little trimming and to take out a moderate quantity

of rock at the northern end to make the structure just the thing for the use and behoof of the Ohio & South Atlantic line, which is now being built straight through it. I hesitate to express any opinion as to whether or no Mr. Bates and nature have been in cahoots thus to cheapen the cost of construction from Clinchport unto Big Stone Gap, but it certainly looks very much that way. Before we left the immediate neighborhood the operations of the railway had been extended as far as this tunnel, and it is reasonably predicted that the Gap itself will be reached before the "flowers that bloom in the spring" have unfolded their sweetly scented petals. At this present it is but justice to say that there are worse roads in the mountains of the South than the one over which our long-earred friends toted us. Any one who has been over it will say so—but probably with much mental reservation and evasion.

Nevertheless the longest and toughest road hath its termination, and, with fair riding, the future city of Big Stone Gap is reached before nightfall. Popularly this coming center of industrial activity is still called Big Stone Gap, although Professor Proctor christened it "Intermont." I don't know why the name doesn't seem to stick. Perhaps it is because it comes so close to "interment," with Preacher's creek near by to run the obsequies. "Intermont" is a fetching name, and descriptive of many things in the situation of the place; it ought to be adopted.

It would be difficult to find a more convenient or a more beautiful site for a town than the one where Intermont has been planted. The crystal, tumbling waters of Powell's river rush through the place, affording, a little higher up, an available water power of great power. This it is intended to utilize for a number of useful purposes. It will make it possible to generate electrical power so economically that the whole town will doubtless enjoy the benefit of incandescent lighting at not much over the cost of kerosene; and then it will make possible the transfer of electrical power to coal mines to be utilized in machine mining.

Lavish as the natural forces have been in endowing the country North and West of the Pine mountain ridge with coal—as instanced in what we have considered of the several Kentucky counties—it would seem that the blessings in this line vouchsafed to the mountains between the Pine and Cumberland, both at Big Stone and Big Creek Gaps, have been superlative. The coal resources of Intermont lies through the Gap on the north side of Stone mountain—a continuation of Cumberland mountain. Callahan, Preacher, Looney and Pigeon creeks furnish the drainage of the hills that carry as fine a coal basin as will ever be found in the United States. The area of this basin has not been definitely fixed, but it obviously covers a large territory, and there is enough to all appearance to justify the most extensive coal operations for more years than anybody but a professional actuary would care to calculate. There are three or four large and workable seams of good coal above drainage. The companies interested are having a careful exploration made under the care of Mr. J. M. Hodge, a mining engineer of reputation; but the work is not complete, and I can only express an opinion on that portion of it which has been conclusively devoted to what the country people call the "Big Seam," and the Virginia geologists the "Imboden" Seam—so named for General Imboden, who, by the way, I was much disappointed not to meet on the ground. This Imboden Seam has been identified by a number of geologists as the counterpart of the Elkhorn coking seam. As far as I am able to conclude from observation and information they occupy the same horizon and are identical in appearance. Except-

ing on lower Elkhorn creek in Pike county, Kentucky, it has been never my lot to behold such superior coal in giant veins. Whether these extra wide seams are an advantage in respect of economical mining or not, it surely is a pleasant sight to see an opening uncovering say sixteen feet of fine coal. Beside the sixteen feet opening I visited one of twelve feet, another of six feet ten inches, and still another of six feet two inches. The two last mentioned were without parting save a half inch or so of mineral charcoal about the center of the seam. The larger veins show some slate parting at about six feet from the bottom, but nothing to interfere with practical and profitable mining. It will be necessary to go into the analyses of these coals, and to discuss their relations to the iron ore resources of the vicinity, as well as the ore resources of the magnetic iron district, at some length—and that is sufficient matter for another paper.

GOLDSMITH BERNARD WEST.

The Greatest Activity Yet Reported in Southern Development.

Great enterprises are crowding one upon another so rapidly in the South that no one can take a general view of the whole situation without being amazed at the magnitude of the revolution that is in progress. The MANUFACTURERS' RECORD of this week contains, we believe, reports of the organization of a greater number of gigantic enterprises than ever before made public in one week. One of the most striking features is the heavy investments of Eastern and especially New England capital, which is pouring into the South as it formerly did into the West. A number of Philadelphia capitalists have just returned from Florence, Ala., where they invested heavily, including, it is reported, \$300,000 towards a \$500,000 carpet mill. The New England excursionists to Fort Payne and Denison left, it is said, over \$500,000 in these two towns last week. Special dispatches to the MANUFACTURERS' RECORD announce the organization of a \$5,000,000 company, with all stock subscribed, by leading New England bankers and others, who have purchased 2,000 acres of land adjoining Chattanooga, where extensive enterprises will be established, and the purchase by a \$3,000,000 Northern company of 300,000 acres of land in East Tennessee, the enterprise being in the hands of the wealthiest members of the prohibition movement. In Chattanooga a \$1,000,000 bank will open for business shortly. Two companies, one with \$300,000 and the other \$600,000 capital stock, have been organized in England for gold mining operations in Georgia. Birmingham has organized a \$1,000,000 coal mining company; Center, Ala., a \$100,000 iron company to repair and operate an old furnace; Dadeville, Ala., a \$50,000 cotton mill; Mobile a \$50,000 paving company; Kentucky a \$500,000 contracting company. In Louisiana a sulphur mining property has been sold for \$200,000. Laredo, Texas, has secured a \$50,000 foundry and machine shop. In Virginia there have been about a dozen big enterprises, including a \$200,000 town company, \$50,000 lumber company and \$200,000 iron company at Graham; the sale of iron property on Cripple creek for \$100,000 for development; a \$100,000 iron company and \$100,000 town company at Max Meadows; a \$100,000 manufacturing company at Richmond; a \$1,000,000 land and investment and a \$500,000 land company at Roanoke, with many other enterprises being actively worked up. This is but a brief summary of the leading enterprises reported in this week's MANUFACTURERS' RECORD, but it indicates a degree of activity that has probably rarely ever been seen in the development of any section of our country.

The Denison Excursion.

Mr. W. P. Rice and His Associates
from New England at the
Gate City of Texas.

Heavy Investments in Real
Estate, Based on the As-
surance of Various Di-
versified Industries.

VIEWS OF PROMINENT NEW ENGLANDERS
CONCERNING THE SOLIDITY OF DEN-
ISON'S IRRESISTIBLE BOOM.

A Trip to the Great Coal Fields of
the Indian Territory Just North
of Denison.

"COKE IS KING."

[Spec. correspondence MANUFACTURERS' RECORD.]

DENISON, TEXAS, October 22, 1889.

Before telling about the visit of the most substantial party of investment-seekers that ever came into the South, a word or two congratulatory of the party's objective point. Everyone knows that Denison, gate-way city of that State which more than any in the Union is entitled to be considered in itself an empire, and a great many people are finding out Denison's wonderful material resources, but the crowning glory of Denison lies in the character and quality of the men who are developing her resources.

Not long ago I heard a preacher, in the course of an argument to show that the world is growing better, declare from the pulpit that this latter-day aggregation of wealth in the hands of a comparatively few was not a curse to the country, but a blessing. The assertion struck his hearers like a clap of thunder from a cloudless sky. But when he went on to show how hundreds of great public enterprises, which were doing a world of good, had been consummated by aggregated capital in less time than formerly would have been spent in talking about them, it was admitted that there was at least food for thought in his startling position. Waiving the question of the correctness of this theory, I venture to say that no reasonable man could have accompanied the two great excursions that have come here this year without admitting that aggregated wealth has proven an unspeakable blessing, at least, to the Gate-way city of the Lone Star State. For, with all her natural resources, the city has made greater strides in a few months than without this aggregation of capital would have been possible in years. And the Denison of the future will owe her chief debt of gratitude to men, methods and money.

Indeed, the people here generally seem to consider the day on which Wendell Phillips Rice picked out the place to make it the field of his greatest endeavor—the one to whose prosperity he would devote the prime of his vigorous manhood—as the most fortunate day in Denison's history; for on that day it became a settled fact that the wondrous resources of the place would be developed not in the slow old way, but in a way so aggressively well directed as to quadruple the population in less than a decade.

Nor is it intended, while emphasizing the importance of Mr. Rice and his associates from the East, to lose sight of the work of those who labored early in the field, and through whose liberal-minded course the way was prepared for the splendid results now in sight. At many Southern and Western towns the old citizens, while anxious enough for Eastern and Western co-operation,

either don't know how to go about getting it or else double and quadruple the price of their property the moment there is so much as a rumor of outsiders coming to invest. The people of Denison made no such error. On the contrary, they gave the new comers a chance to buy half the vacant property in the place at the figures which prevailed before there was any thought or expectation of a boom. The consequence was, hundreds of thousands of dollars were invested by those who came with first excursion. The good reports that these first-comers carried home last spring of the public spirit and broad-minded ways of the Denisonians, made it an easy matter to organize this second excursion; and the same causes will make it easy to bring a train-load of investors to Denison whenever Mr. Rice has time to pick out the right men.

And now a few words about how this particular party of picked men from New England were treated in Denison and what they did while there. When the long string of superb new Pullmans, vestibuled from end to end, rolled up to the depot, a band of music and the military companies and, it seemed, half the citizens in the

were unfortunately not taken down, and I have only a partial report of what was said by Dr. Ford, but the following is substantially what he said:

"COKE IS KING."

I have been intimately acquainted with Denison and her resources for nine years. I have invested largely in Denison real property, and I invested here upon a situation—that situation being the contiguity of the large coking coal fields of the Choctaw nation immediately north of the city of Denison. I would not have invested here upon any other resources, however great they may be. The magnificent cotton fields here, also the great agricultural resources, climate, fruits and the many railroads centering here certainly make an inviting field. But they all are insignificant compared to the great and lasting power stored in this great coking coal field. What has made Pennsylvania the iron State of the Union? Certainly not her iron ores, for she shipped into the State from beyond her borders nearly 4,000,000 tons of Bessemer steel ore last year, and nearly all of their best quality of ore was shipped 1,000 miles. One million

have said that coal is king. Let me say to you that coke is king in the building of iron cities. The heaven is already at work; there is a power behind the throne in this situation that you little know—a power that can command its millions of capital, and this day experts are busily at work arranging the details, and when completed you will see an enterprise started here that will startle you with its vast proportions—the great trans-Mississippi steel works. I confidently expect to see a city of 100,000 inhabitants in ten years.

MR. STONE, OF MAINE.

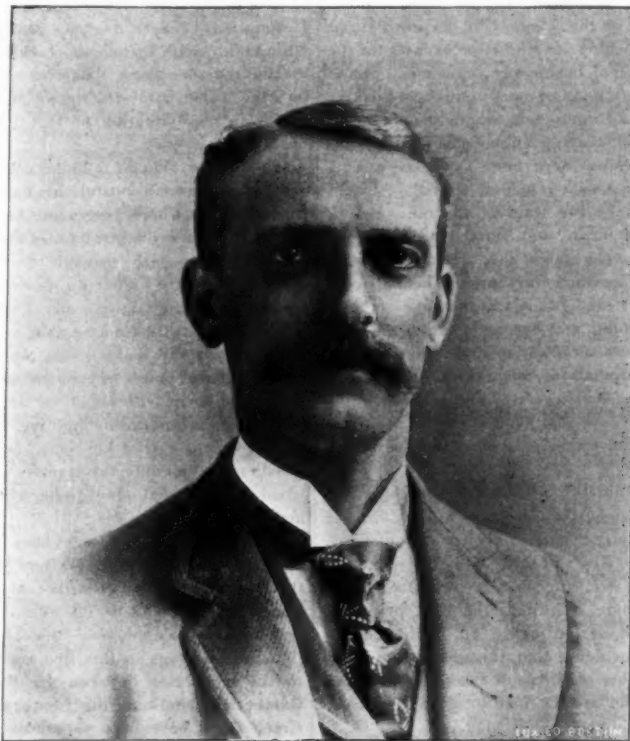
One of the most eloquent among the visiting speakers was Mr. Edwin Stone, a prominent lawyer, from Maine. Among other things, he said he had just come to Texas and to Denison for the first time in his life. After partaking of the lavish hospitality of the good people of this city and listening to the greeting of welcome from Mayor Toney, who wore a smile as broad almost as this great State itself, he had started out on a quiet tour of observation on his own hook. In order to get some idea of the transportation facilities of the city and its volume of business he first visited the railroad yards and was free to say he was utterly astonished at what he saw there. The great number of cars moving in and out, the tremendous mileage of switching tracks, the large freight houses, the repair and machine shops, the scores of screeching locomotives and the great number of busy men there employed had astonished him and impressed him very forcibly with the great future possibilities of the city. [Applause.] He had also visited the exhibition and examined the products there displayed, and was more than agreeably surprised at the extent and character of the display. He had no hesitation in saying that the railroad facilities, the agricultural and mineral resources, combined with the intelligence and enterprise of Denison marked the city as one to be ranked later on among the largest of our great inland cities. [Applause.] I know that there are men who have traveled South—to the sand hills of Florida and the swamps of Mississippi—and have returned to New England to ridicule and belittle thriving and enterprising towns in States which they never saw. So might I have traveled through Alabama and Louisiana and back along the coast to old Virginia and home, and have ridiculed and belittled your enterprising and growing city of Denison without having seen it; but I am not built that way. I have seen Denison and am going to see more of it, and I assure you I shall return to Maine proud of Denison and proud to speak well of her upon every occasion, believing as I said before that her future is bright and that she will take rank as one of the largest and best of our inland cities.

COL. PARKER, OF VERMONT.

Col. Harry E. Parker paid a well-merited compliment to the conscientious conservatism of the men who have been presenting the advantages of Denison to people at a distance. Said he:

"What a magnificent place to build a great city, beatifully situated in the center of prosperous people, imbued with New England energy and a disposition to 'get there.'"

We have heard a great deal in Vermont about Denison, and have taken the statements, which seemed extravagant (from that distance), with considerable allowance. We are now on the ground, and after careful investigation, do not hesitate in the least to say that Mr. Rice, Dr. Ford and their colleagues have been candid, truthful and conservative in their statements regarding opportunities held out in Denison for the safe investment of money, which will show large profits by the legitimate enhancement of values, caused by the rapid growth of the city, which you all believe will be the result caused by establishing



W. P. RICE, THE INAUGURATOR OF NEW ENGLAND EXCURSIONS TO THE SOUTH.

place were there to make every one feel welcome. The day was bright and balmy—as some one expressed it "regular W. P. Rice weather." Carriages took the party to the Albany, and after breakfast the mayor made a formal speech of welcome in the exposition building. From that time on till the party left there was nothing left undone to make every one feel that the freedom of the city was his. Fifty carriages stood in line every morning and each visitor rode at will in and about the city. There was a great banquet given at which some excellent addresses were made. There was a trip to the coal fields across Red river in the Indian Territory, and a concert by Elsa Clark Cushing, Boston's most gifted soprano, aided by local talent. But it is impossible within the limits of this letter to give in detail half that was done.

Before quoting one or two of the speeches at the banquet made by New England men, I should have liked to tell your readers what was said by two men who have made the resources of Denison a special study not for a few days but for years—namely, Mr. W. B. Munson and Dr. J. M. Ford. The remarks of Mr. Munson

and eight hundred thousand tons came from the north peninsula of Michigan, 1,000,000 tons from Cuba and large quantities from the Cranberry mines in North Carolina. Pennsylvania is not the iron State of the Union, but the coke State of the Union. The law of iron and steel manufacture is that the ore must go to the coke. Now the situation here is that Denison is on the Red river, with the second largest coking coal field in the Union lying immediately on the north; to the southwest lies the great Llano iron field, containing the richest Bessemer ores in the world, and to the southeast lies the Rusk and Dangerfield brown hematite ore-beds, that have no superior for making car wheels and pig iron. These ores must come to Denison to be smelted by the coke here; these ores can be laid down here for one-half the cost of sending ore to Birmingham; this coke, gentlemen and ladies, is the Aladdin lamp that will build here one of the greatest manufacturing cities of the trans-Mississippi country. What has made Pittsburg, Scranton, Birmingham, Ala., Anniston and Fort Payne? Coking coal. It has been said that cotton is king; many have said that corn is king; others

cotton mills, steel plants, canning factories and other industries already assured to Denison.

With able, honest and energetic men at the helm, abundant resources and the confidence of New England and Texas giving you plenty of capital, you have every requisite necessary to insure phenomenal success."

There were invested in round numbers about half a million during the sojourn of the excursionists, although it is impossible at this writing to give any reliable list of the various enterprises in which stock was taken.

THOMAS P. GRASTY.

Another Extensive Enterprise to Develop the South.

Several weeks ago the MANUFACTURERS' RECORD stated that Eastern capitalists had purchased several hundred thousand acres of mineral and timber land in East Tennessee, but that particulars were withheld from the public. We are now able to make the first official announcement of this enterprise, which is one of the most extensive yet undertaken for the development of the South. The East Tennessee Land Co. has been organized with a capital stock of \$3,000,000, with Gen. Clinton B. Fisk, of New York, as president, and among others interested are Jas. B. Hobbs, I. K. Funk, A. W. Wagnall, Wm. Silverwood, J. R. Leeson, Fred. Schumacher, John Hopewell, Jr., Frederick Gates, Philip S. Mason, W. C. Harriman, Thomas Carlton and A. A. Hopkins. Many of these names will at once attract public attention as of men who have been foremost in the prohibition movement, and the supposition is that the enterprise will be vigorously pushed by the prohibition people of the country, as it not only contemplates the carrying out of great industrial projects, but the colonization on a large scale, on 250,000 acres of agricultural property which have been secured, of Northern and Western farmers, all deeds to town lots or farm lands, so we learn, having a clause prohibiting the sale of whiskey. The scheme also contemplates the development of extensive coal and iron fields, the establishment of a popular summer and winter resort, the building of a central iron city and an extensive system of railway development.

This company has purchased three hundred thousand acres of land, much of which is rich in minerals and timber. Explorations have been in progress several months over this wide territory, and have revealed mines of great wealth of magnetic and other iron ore, and the finest bituminous coal. The great bulk of these lands lie along both sides of the Cincinnati Southern and the East Tennessee, Virginia & Georgia Railways, and are at once accessible. Other roads are projected through them. A navigable river and many good-sized streams afford means of transportation and supply water-power.

The company proposes to sell or lease 250,000 acres for farming and gardening, reserving all mineral rights, and to develop its mineral acreage through subordinate companies under royalty.

The new city to which these mineral and farm lands are to contribute will be called Harriman, and is located at the junction of the C. S. R. R. and the E. T., V. & Ga. R., just outside the mouth of Emory Gap.

The health resort which this company proposes, and the establishment of which has begun, lies up the Emory some twelve miles, upon the high bluffs bordering that picturesque stream upon the west. It bears the name of Deermont. A great hotel and sanitarium are projected there.

Address of manufacturers of excelsior in the South is wanted by L., Drawer 24, Baltimore, Md.

The Iron and Metal Situation.

As far as purely local interests are concerned it does not appear that any change has taken place in the iron or allied trades since last week. Advices from Pittsburgh and vicinity indicate some reaction from late extreme high prices for Bessemer pig iron in that quarter however, and suggest that speculative holders, if not producers, are inclined to profit by the sharp advance that has taken place since the beginning of the month. The railroad companies, there is reason to believe, have cause to suspect that the strength of the steel rail market is more pronounced on the surface than beneath, and all reports go to show that it is a very difficult matter to make sales except at concessions from mill agents' "nominal" prices. Apart from the instances cited and some little concession on previous extreme prices for steel billets and slabs, there has been no reaction, however, and that the change is indicative of anything in the nature of a turn in the tide is not believed to be the fact. It is stated that a local firm of importers and commission merchants prominently identified with the Southern pig iron industry, have purchased heavily of American Bessemer pig on European orders for speculative account of late, and there is a suspicion that some connection exists between this trading and the alleged combination of Mr. Andrew Carnegie and allied capitalists to control the market for crude material employed in steel-making. Reports came from Pittsburgh that a block of 20,000 tons Bessemer pig was offered in that market without finding takers, and that the entire lot was subsequently purchased by Chicago parties at \$20 at furnace. Whether this was a part of the alleged late English purchases is not clear. Foundry pig iron is offered very sparingly for early delivery, and as yet few contracts have been made for the same or for mill grades for next year's delivery. Prices are strong, with the range of \$17.50@18.00 quoted for No. 1 X foundry; \$16.50@17.00 for No. 2 X foundry, and \$15.50@16.00 for grey forge. Scotch pig is still so high in price as to be practically unsalable in this market. London cables note continued speculative excitement in iron in England, with sales reported at as high as 60/ for Scotch warrants and 58/9 for Middlesbrough pig.

There has been very little new business in steel rails, and purchasing agents for railroad companies who have latterly figured as intending buyers seem to have withdrawn for the time being. It is stated that a sale of 4,000 tons has been made at less than \$32 at a Pittsburgh mill within a week's time, and there seems also some reason to believe that, while generally quoting \$32 as their price, some Eastern concerns would do a shade better on desirable orders. The contracts closed for the Vanderbilt roads, it is now reported, involve a total of 60,000 tons, but as yet there is no satisfactory evidence that the purchases exceed 20,000 tons. Steel billets and slabs are now quoted at \$34 at Pittsburgh, and at corresponding prices in other localities.

Purchases of spiegeleisen latterly have been moderate, but importers report a considerable demand, and assert that round lots of 20 per cent., if available, could readily be placed at \$33 for forward delivery. The prices asked are \$34@35 for 20 per cent. and \$85@87 for 80 per cent. ferro manganese.—N. Y. Commercial Bulletin.

TO BUILD 20-TON ICE FACTORY—JACKSON, TENN., Oct. 22, 1889.—The Tennessee Ice Co. is being organized at this place. The capacity will be 20 tons. The company will be organized about the 1st November. R. B. CRAWFORD & CO.

"THE Greatest Industrial Journal in the World" is what the Brunswick (Ga.) Times calls the MANUFACTURERS' RECORD.

The Fort Payne Furnace Co.

This furnace company is organized under the laws of Alabama with a paid-up capital of \$200,000, with J. M. Ford as president; C. O. Godfrey, vice-president; S. C. Hathaway, Jr., secretary and treasurer; John H. Mullin, M. E., superintendent. The board of directors consists of J. M. Ford, W. P. Rice, F. H. Toby, H. B. Pierce, J. W. Spaulding, S. C. Hathaway and C. O. Godfrey.

The furnace is 40 to 65 feet high with 14 feet bosh, and will have two blast engines with blowing cylinders 72 inches diameter by 48 inches stroke; its steam cylinder 36 inches diameter by 48 inches stroke. There are to be three hot blast stoves 65 feet high by 16 feet diameter, a modification of the Cowper-Seimen, the air making only two passes. The power is furnished by twelve two-flue boilers 54 inches diameter by 28 feet long, arranged in batteries of two. The draft stack is of iron lined with brick, 175 feet high and 10 feet in diameter; a hoist power of cast iron columns well braced, with an improved Crane hoisting engine. The foundations of this tower consists of iron piles, star-shaped section driven into the ground from 15 to 20 feet. The columns are to pass through a heavy cast iron plate embedded in concrete. The furnace stock-house is 75 by 125 feet, with two trestles 12 feet high connected with tracks from the coal and ore mines and the coke ovens.

The location of the plant is most excellent with reference to its supplies. There is an eight-foot vein of brown hematite ore, analyzing 55 per cent., opened within 1,000 yards of the stock-house, and it can be brought into the house by an incline. Very nearby the company own immense beds of hematite analyzing 50 per cent. iron and a fossiliferous hematite which contains from 20 to 30 per cent. carbonate of lime. All the ores are remarkably free from phosphorus. Very nearby a plant of 200 coke ovens is under construction. The coal will be washed and crushed before coking. This coal will be obtained from the company's mines on Lookout Mountain, to which eight miles of railroad have already been built. The vein is some 30 inches, and is said to be fine coking coal and comparatively free from sulphur. The following is the comparative analysis:

	Fort Payne.	Connellsville.
Moisture.....	0.15	0.50
Volatile gases.....	0.54	0.47
Fixed carbon.....	91.67	88.962
Sulphur.....	1.12	.610
Ash.....	6.42	9.741

The furnace plant was designed by John H. Mullin, under whose supervision it is being erected. The iron work is to be furnished by Alex. K. Rarig & Co., Columbus, Ohio. It will go in blast March the first next.

WILL BUILD ANOTHER SAW MILL—JACKSONVILLE, N. C., Oct. 20, 1889.—We are now operating a saw mill at this place and expect to put in another plant. Have not yet decided on time or capacity of same. ONSLOW LUMBER CO.

ENLARGING CAN FACTORY—BALTIMORE, MD., Oct. 23, 1889.—We are enlarging our factory C, foot of Second street, and will need special machinery for use in making all styles of cans.

KIRWAN & TYLER.

FLOUR MILL TO BE BUILT—TANEYTOWN, MD., Oct. 24, 1889.—We will erect a steam roller flouring mill at this place. Will have to buy boiler, engine, mill machinery and electric plant.

ZOLZCOFFER & BRO.

LARGE BRICK WORKS—LYNCHBURG, VA., Oct. 22, 1889.—We will put up a first-class plant for making bricks at Roanoke, and will invest about \$25,000 or \$30,000 in this plant.

ADAMS BROS. & PAYNE.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South cannot find a better medium than the MANUFACTURERS' RECORD.

PROFITABLE ACCIDENT INSURANCE.—The Employers' Liability Assurance Co., Limited, of London, has established branches throughout the United States, with Messrs. Edicott & Macomber managers and attorneys, headquarters 71 Kilby street, Boston. Automatic ticket boxes of the company may be found at all railway stations. \$550,000 is kept on deposit for the payment of policies held here. A gentleman recently insured in Philadelphia received \$750 on an investment of 15 cts. Ten tickets can be taken insuring up to \$5,000.

ONE of the most valued exchanges which reaches the sanctum of the Gate City is the MANUFACTURERS' RECORD, published at Baltimore. This able publication is devoted to the advancement of the material interest of the South. Each week it gives an exhaustive resume of the financial and manufacturing condition of this section of the country. The valuable information contained in one of the 52 copies issued annually is worth ten times the subscription price, which is only \$4 per annum.—Laredo (Texas) Gate City.

PROPOSALS.

SEALED BIDS with specifications will be received by the Board County Commissioners for Orange County, Florida, for the erection of four cells and a corridor with locks and appurtenances and with steps to the corridor similar to the cells and corridor now in the jail at Orlando, Orange County, Florida, the same to be placed on top of the present cells and corridor. Such bids to be forwarded to the Clerk of the Circuit Court for Orange County, Florida, at Orlando, Fla., on or before the first Monday in December, A. D. 1889. The County reserving the right to reject any and all bids. By order of the Board, E. F. WHITNER, Chairman. Attest, D. S. SHINE, Clerk.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 12th day of November, 1889, for all the labor and materials required to complete the approaches to the United States Court-house and Postoffice, building at Carson City, Nevada, in accordance with specification and drawing, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$500. JAS. H. WINDRIM, Supervising Architect. October 17th, 1889.

PROPOSALS FOR STEAM-HEATING APPARATUS FOR GUN AND GUN-CARRIAGE SHOPS, NAVY YARD, WASHINGTON, D. C.—October 4, 1889. Sealed proposals endorsed "Proposals for Heating Apparatus, to be opened October 28, 1889," will be received at the Bureau of Provisions and Clothing, Navy Department, Washington, D. C., until 12 o'clock, noon, October 28, 1889, and publicly opened immediately thereafter, to furnish and deliver at the Navy Yard, Washington, D. C., all the necessary labor and material for fitting the north and south gun shops and the gun-carriage shop at the Washington Navy Yard with steam-heating apparatus, to be placed and connected up, ready for use in accordance with the specifications and blue-prints which will be furnished upon application to the Commandant of the Navy Yard or to the Bureau. The bids decided by lot. The Department reserves the right to reject any or all bids not deemed advantageous to the Government. JAMES FULTON, Paymaster General U. S. N.

WANTS.

WANTED.—A first-class pattern maker. A good workman can secure a permanent situation and good wages paid weekly by addressing GEO. PEACOCK, Selma, Ala.

WANTED PARTNER

With Capital of \$5,000.

to take interest in established lumber and manufacturing business with \$10,000 already invested. Profits last year fifty per cent. Thorough investigation invited. Address

J. W. ROBERTSON & CO., Morganton, N. C.

WANTED.

Capital to Develop.

I want party with \$20,000 cash to join me in purchasing and developing New Town in mineral belt of Georgia. I regard it the finest opening for profitable investment in the South. Only responsible people need apply.

W. H. HOWCOTT,
NEW ORLEANS, LA.

FOR SALE.

DARLINGTON LAND IMPROVEMENT CO.

Lots within the incorporate limits of the town of Darlington, and fine farming lands adjacent, for sale. Railroad facilities good. Fine graded school in town. For further particulars apply to J. J. WARD, President and Treasurer of Darlington Land Improvement Co., Darlington, S. C.

Eastern Lumber Markets.

[Spec. correspondence MANUFACTURERS' RECORD.]

NEW YORK, October 20, 1889.

The New York lumber market is very strong this week, as a result of the unexpected precipitation of a large number of wholesale and retail requirements without any preconceived action. Parties in the West and South who have been waiting for opportunities of selling at better prices were surprised a few days ago to receive large orders for all kinds of hard and soft woods for immediate shipment. The salesmen have been intimating that such action was likely, as all the trade indications pointed that way. The reason is simply this: The bulk of buyers of lumber in this market bought heavily early in the season, and have since then been working down stock until it is now almost exhausted. Fortunately for the trade, builders and contractors have been presented with a great deal of winter work and are now actively preparing for it. This explains the situation and the rather active demand above referred to.

Among the heaviest lumber buyers are parties representing the railroad interests. A great deal of railroad work will be done in the Middle and New England States this winter in the way of building stations, etc., and a good deal of inside work that can as well be done between December and March as earlier or later.

The appearance of New York lumberyards would not seem to argue much of a scarcity of lumber in this market, but it is fast becoming the policy of dealers to carry large stocks, or, at least, stocks which will enable them to fill heavy assorted orders at any time. In years past it has been often necessary for large buyers to go from yard to yard to obtain needed stocks, and it is so now with the smaller concerns, but there are a certain number of large dealers here who keep themselves in position to fill promptly any order that is likely to come along.

The white pine demand has been slackening up a little of late, as usual at this season, so far as retailers are concerned, but wholesalers have under their control larger supplies than usual, both here and at lake ports, as well as in the West. Prices for all kinds of white pine, with the exception of uppers, rule firm, simply because dealers are determined not to yield to the temptation to cut prices in order to make business where it does not legitimately exist.

The hemlock people are winding up affairs for the season. They have had an excellent year, and have realized, most of them, good prices, although in some instances the effects of the flood will not be outgrown for years. Stocks of hemlock of all dimensions are large in the interior and at distributing points near the Hudson.

The demand for yellow pine in this and New England markets continues quite heavy, and the arrivals are up to the October average. There is delay at some Southern points in making shipments, owing to the non-arrival of schooners, but the shipping interests promise to complete all engagements before December.

A good many marine disasters are reported; four or five lumber laden vessels are to-day reported missing. The Mabel L. Phillips, Taunton, Mass., left Charleston on the 12th inst. for Philadelphia, with 558,000 feet of lumber; she was lost off Hatteras light. Very little is said, ordinarily, in trade circles concerning these disasters, but in the aggregate they are very serious.

The failure of Wainright & Bryant, in Philadelphia, a day or two since was something of a surprise to the trade.

Receipts of hardwood in all markets, from Boston to Philadelphia, are increasing, owing to the appearance of a larger

demand. More or less stuff is arriving from West Virginia and Kentucky. A good deal of poplar is coming here from Tennessee. Walnut is coming, not only from the far West, but considerable lots from Pennsylvania, where the farmers are devoting a good deal of their leisure time to its preparation for market.

The demand for cherry grows, as its popularity is rapidly increasing among the furniture manufacturers. Walnut for export is still in demand, but the season is pretty well over. Foreign markets absorb all that is sent at good prices.

As to lumber prices during the rest of the fall and the winter it is impossible to make any definite statements. The market conditions are constantly changing, and shippers should remember that their safest course is to seek the advice of dealers in good standing, who have facilities for knowing just how things are going.

The four-masted schooner Douglass Dearborn has been chartered to bring a cargo of lumber from Puget Sound to Philadelphia, much to the surprise of the Philadelphia lumber trade.

W. EDWIN PEREGOY & CO.

WHOLESALE AND COMMISSION

LUMBER, LOGS AND STAVES,

113 S. GAY STREET,

P. O. Box 483. BALTIMORE, MD.

A. C. DANNER,

Mobile, Ala.

Yellow Pine Flooring and Ceiling,

Shedding, Finishing, Docking, Car Sills,

And all kinds of Rough or Dressed Yellow Pine.

TIMBER LANDS.

Large and small tracts Yellow Pine, White Oak, Cypress Timber Lands; all Southern States. Timber estimated and reported upon in any Southern State.

W. H. HOWCOTT, New Orleans, La.

E. B. HUNTING & CO.

BALTIMORE, MD.

JACKSONVILLE AND FERNANDINA, FLA. AND SAVANNAH, GA.

WHOLESALE MERCHANTS
AND MANUFACTURERS OF

Yellow Pine Lumber

Buy for cash on cars at Mills and sell delivered to all points reached by rail or water. Write Baltimore Office.

Spokes for Sale.

White Oak and Hickory Spokes, any grade and size for sale cheap. LANCASTER MFG. CO., Lancaster, S. C.

THOMAS J. SHRYOCK & CO.

YELLOW PINE COMMISSION MERCHANTS.

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No. 1 Single Surfacar.

The accompanying cut shows a newly designed planer and smoother, for which the manufacturers claim that it has some

pered steel, and can be set up in the tube so as to scrape out all accumulation and still are perfectly elastic. The double set of scrapers, being in the center of the springs and supported by them, cannot be

lateral motion, and is connected by foot lever for controlling its position to the disc. A spring is used to automatically separate the frictions, the driver acting as a loose pulley when disengaged.

to the swinging of a hammer by hand. The force of the blow is regulated by the pressure applied to the pedal, striking quick or slow, heavy or light as desired, the operator having at all times complete control over the machine. The movement of the hammer can be governed to suit any requirement.

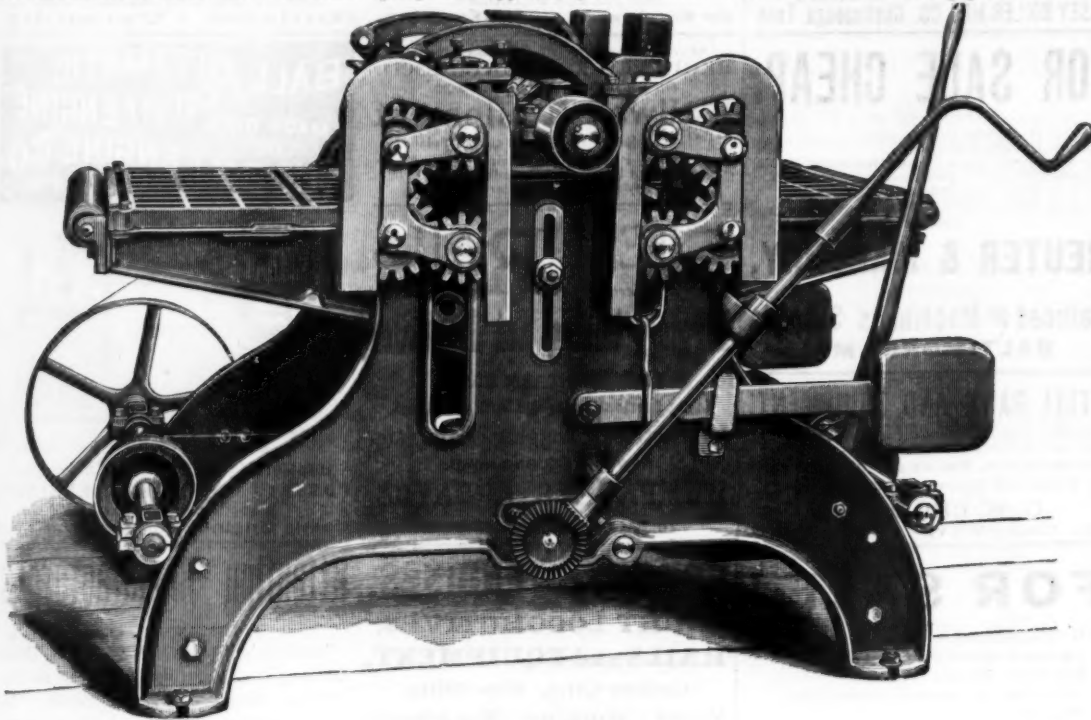
For wagon, heavy truck and artillery work, the spokes should be driven by not less than three blows to obtain the best results, striking first an extremely heavy blow, reducing the pressure of each succeeding blow, until the shoulder of the spoke has reached the hub.

Carriage spokes are driven with a special light hammer attached to a spring helve, the hammer striking sharp, quick blows in rapid succession, rebounding after each stroke. The rapidity of the rebound or return actions, length of stroke and pressure required, are instantly changed to suit the operator by the amount of pressure applied to the pedal.

The adjustable gauge is conveniently arranged to guide the spoke being driven to exact position, returning out of the way when not in use.

The hammer helve is attached to the machine by a friction binder, and is easily removed when desired. It is supplied with three hammers—heavy, medium and light—to suit all classes of work. Weight of machine complete, 2,500 pounds.

For further particulars regarding this machine, address the manufacturers, Defiance Machine Works, Defiance, Ohio.



NO. 1 SINGLE SURFACER.

of the greatest advantages yet put on any machine of its class. The demand of the trade in many cases calls for a medium weight machine for both planing and smoothing; something that has a powerful steady feed, material enough in it to stand a heavy strain, and all the latest improvements of a pressure bar on each side of knife for doing the finest smoothing. The cylinder is a solid steel forging, has long journals running in bearings lined with genuine babbitt, and provided with improved self-oiling caps. The feed on this machine is very strong and powerful, the four large rolls being all geared with patent expansion gearing. The changes in thickness are made by a crank at the side of the machine, and can be made while running. They are built with cylinder belted at one or both ends, as may be desired. The single belt machine has but one pressure bar. The double belt machine has two pressure bars, an extra feed shaft with cone pulleys, and three rates of feed. This machine will, it is said, do the finest of work and plane stock 4 inches long without clipping the ends. It will plane 24 inches wide, and from 1-16 to 6 inches thick. Countershaft can be placed on floor or ceiling, and the price is such as to place it within the reach of all.

Further information regarding this machine can be obtained from the manufacturers, the Dirigo Engine & Machine Co., Portland, Me.

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The duplex tube-cleaner we herewith illustrate has been long and favorably

broken off, no matter how hard usage the article receives. There are no bolts, nuts, wire or coil springs to be affected by hot tubes. The scrapers can be set up and slackened quickly, while the pointed end facilitates its entrance into the tube. This cleaner is made in all sizes from 1½ to 6 inches by Felthousen & Sherwood, of Buffalo, N. Y.

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The engraving represents a special machine for driving spokes in carriage and wagon hubs. It is extremely simple, and contains desirable features over machines heretofore used for this purpose.

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The hubs are held at either end in a pair of adjustable saddles having a vertical adjustment for the length of spoke and a horizontal adjustment to accommodate the length of hub.

The upper shaft supporting the hammer, of steel, 1 15-16 inches diameter, running



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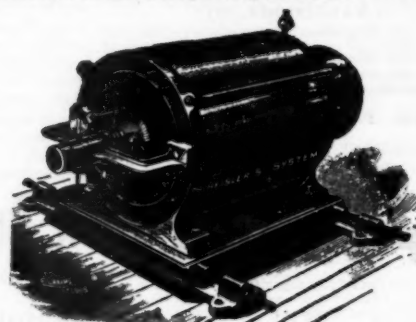
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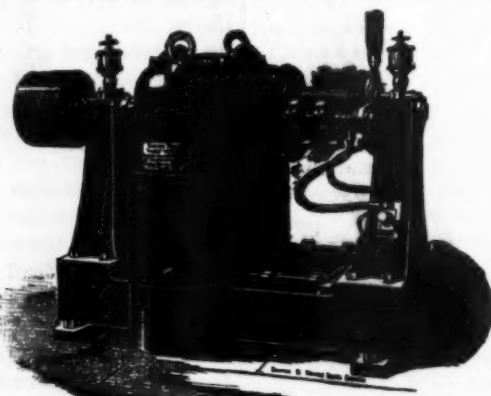
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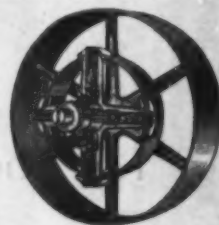
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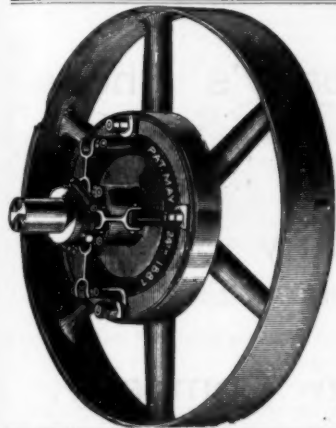
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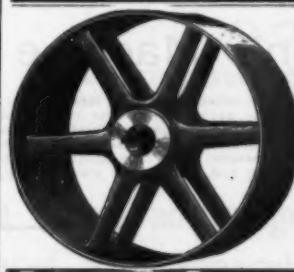
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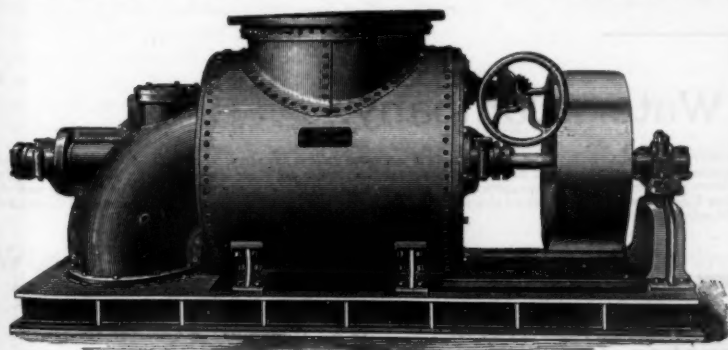
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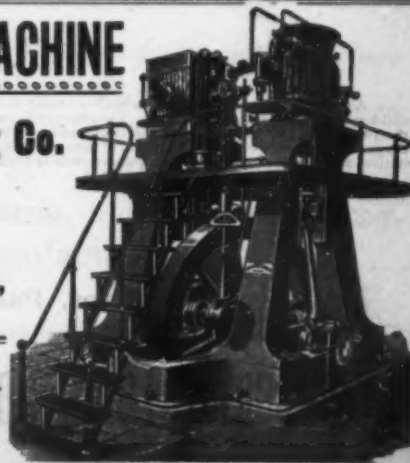
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1. The United States Rolling Stock Company's Plant.

For full description see back numbers of the "Record"—June 1, 8, 15, 22, 29.

2. The Louisville & Nashville Railroad Company's Shops.

For full description see back numbers of the "Record"—July 6, 13, 20, 27; August 3, 10.

3. The Southern Horse Nail Company.

4. The Decatur Iron Bridge & Construction Company.

For full description of Nos. 3 and 4 see back numbers of August 17, 24, 31 and September 7, 14, 21.

5. The Ivens & Son's Machine Company's Works and Foundry.

These works, covering about four acres, are located near the new passenger depot at New Decatur, with a frontage of about 500 feet on the Louisville & Nashville Railroad, and switch tracks for loading and unloading. They will shortly have a similar frontage on the Memphis & Charleston division of the East Tennessee, Virginia & Georgia Railroad, the line of which road is about to be changed so as to pass through New Decatur as well as Decatur proper, with freight yards in New Decatur. The main building, which is an imposing structure of brick and stone, with metal ventilating roof, contains the machine shop,

foundry, blacksmith shop, boiler room and offices, the latter being in the centre and three stories high, with a cupola. The wood-working and pattern shop is in a separate building. The boiler works are as yet incomplete. The specialties manufactured by this company are engines of various descriptions, particularly the Ivens self-contained engine for ginning and baling cotton; also improved cotton baling presses and machinery for the irrigation and for the drainage of land.

6. The Decatur Electric-Light & Power Company.

The admirable plant lately constructed for this company by the Thomson-Houston Electric Company consists of a brick building, 60x80 feet, with metal roof. The machinery consists of three dynamos, boilers of 100 horse power, a 100 horse-power high speed Corliss engine, and

a 60 horse-power Ball engine. The plant is running at present 50 arc and 600 incandescent lights, but has the capacity for doubling this quantity. The company has erected already eight miles of poles and wires. It is unquestionably the finest electric light plant in Alabama at this time.

7. The Decatur Water Company.

A splendid system of water works has been constructed for this company by Howland & Ellis, the well-known firm of engineers at Boston. They have laid already 22 miles of pipe. The water is obtained from the Tennessee river, the connection with the pump-house being a 30-inch cast-iron conduit leading from the pump-well, under the bed of the river, to deep water in mid-channel. The buildings at the pumping station, near the river, consist of an expensive circular brick pump-house, 54 feet in diameter, and a brick

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Ex-Mayor ABRAM S. HEWITT, of New York, says this section of Alabama "is the only place upon the North American Continent where it is possible to make iron in competition with the cheap iron of England."

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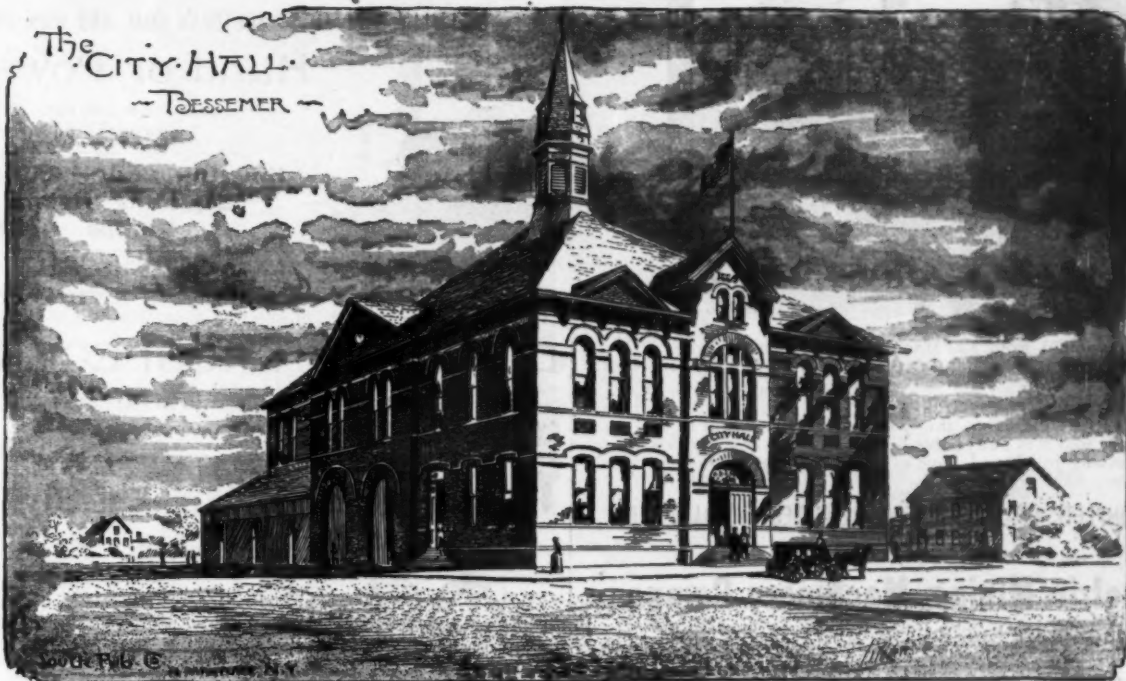
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Fifth.—In addition to the coal and iron mines above referred to, in connection with the five furnaces, these proprietors own the **MAGNETIC ORE LAND COMPANY**. The total coal, iron and limestone lands owned by these corporations amount to over

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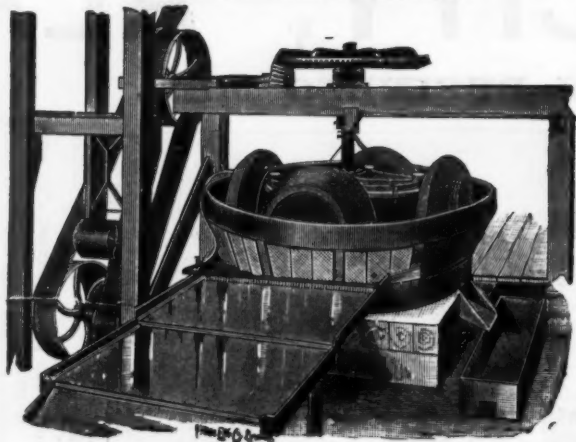
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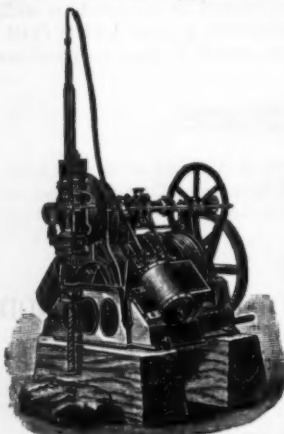
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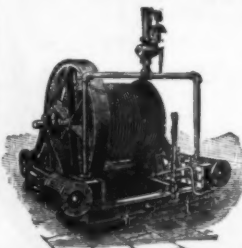


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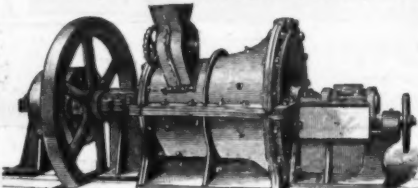
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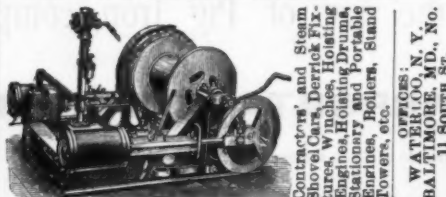
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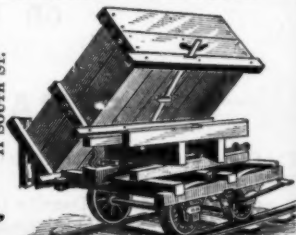
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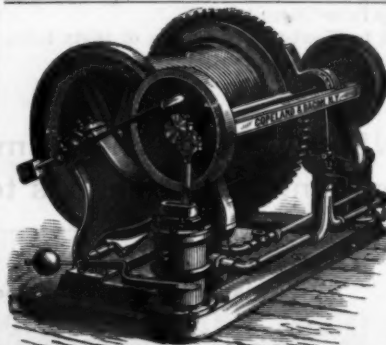
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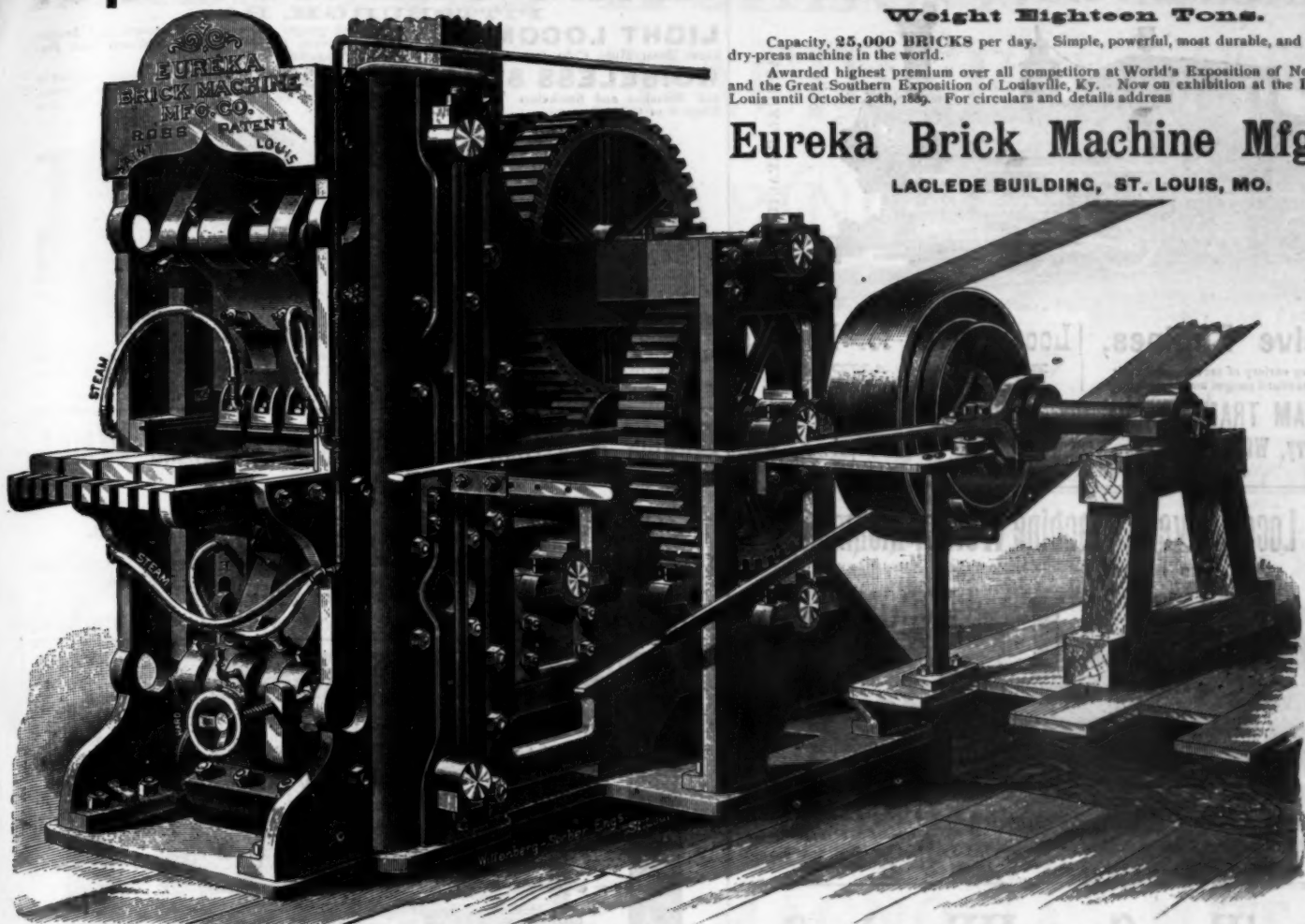
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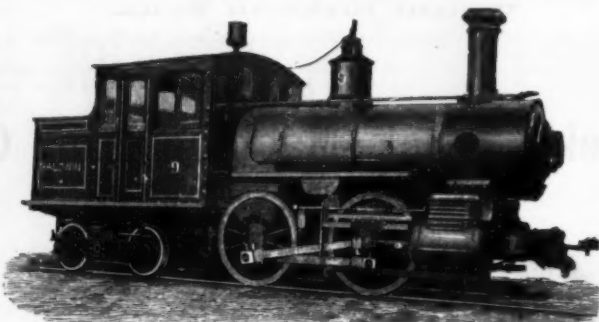
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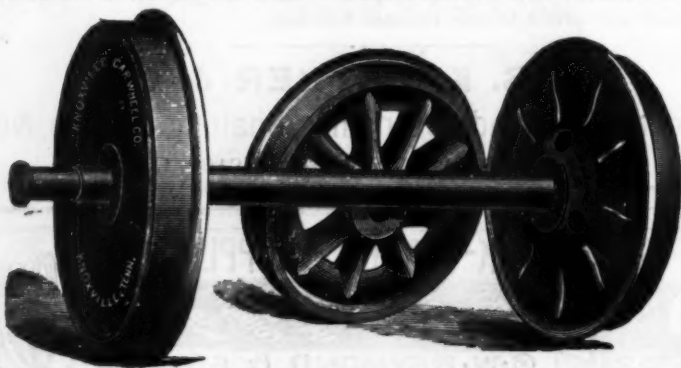
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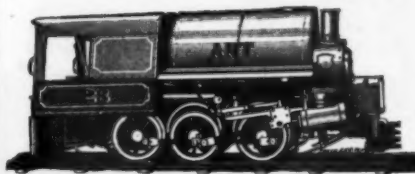
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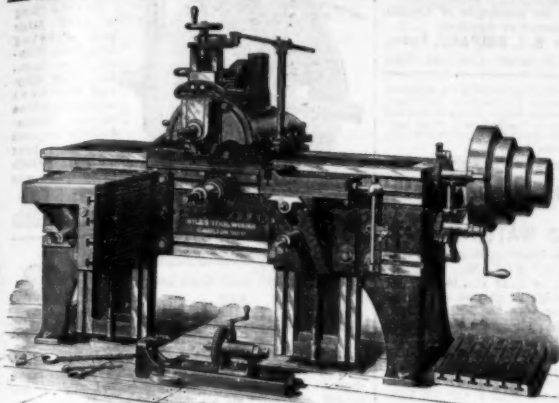
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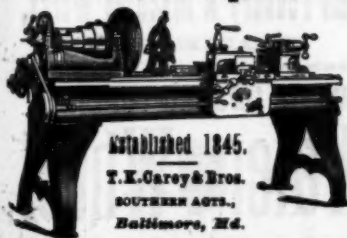
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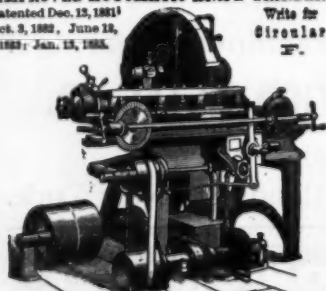
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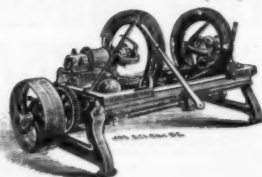
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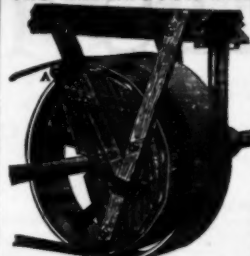
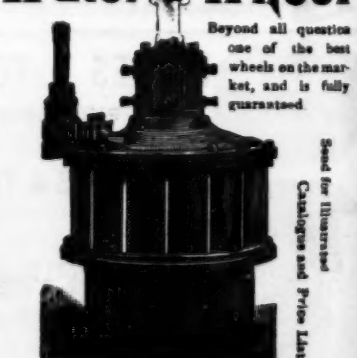
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TRADE NOTES.

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CHANGE OF ADDRESS.—The Philadelphia Shafting Works, George V. Cresson, proprietor, lately located at 18th and Hamilton streets, are now established at 18th street and Allegheny avenue, Philadelphia.

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THE Akron Belting Co., of Akron, Ohio, have recently furnished belting to the amount of \$10,000 or more to go into the mills of Gate City Oil Co., of Atlanta, and the Charlotte Oil & Fertilizer Co., of Charlotte, N. C. They report largely increasing sales of their oak leather belting in the Southern States.

CORRUGATED AND SHEET METAL BUILDING MATERIALS.—The Cincinnati Corrugating Co., in their annual catalogue, announce that their increase of business has compelled the removal and re-establishment of their "plant" at Piqua, Ohio. In their new location they have the most complete modern rolling mills under their control, worked by natural gas and specially adapted for the various processes employed in the manufacture of their specialties.

ALL ABOUT ATLANTA.—The Manufacturers' Association, of Atlanta, Ga., has taken a wise step in issuing a concise and comprehensive circular descriptive of the resources of the region south of the Potomac and Ohio and east of the Mississippi. The resources of Georgia and the industrial and commercial advantages of Atlanta are more particularly set forth. The main purpose of the circular is to exhibit what Atlanta has accomplished, and the attractions which she offers to investors.

BUCKEYE PORTLAND CEMENT.—The Buckeye Portland Cement Co., office at Bellefontaine, O., with works at Harper, Logan county, same State, issue their annual circular. The circular is a good manual for the use of all having to employ cement, as it contains a variety of information not readily obtainable elsewhere. It treats of cements in general, and the Buckeye Portland in particular, the making of concrete, cement walks, gives the results of tests by experts, with tables, weights and analyses, together with other useful information.

RAILWAY EQUIPMENT.—Reginald Canning & Co., 115 Broadway, New York, in sending out their fall circular, invite attention to their list of second-hand standard and narrow-gauge rolling stock. They offer a number of locomotives of the leading makes and a large lot of passenger and combination cars. Besides, they supply chair and sleeping coaches, box-freights and dongolas and other cars. Photographs, blue prints and prices mailed on application. The firm make alterations in locomotives and cars if required, and are prepared to sell on the car-trust plan if desired.

MERIT RECOGNIZED.—The Ingersoll-Sergeant Rock Drill Co., of New York, have secured another triumph for their celebrated drills, the company winning the first prize—a gold medal—at the Paris Exposition.

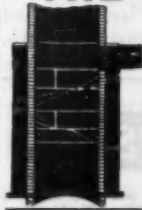
DURING the past few weeks the Thomson-Houston Electric Co., of Boston, has completed the electric equipment of a number of street railways on which the electric cars are now in daily operation. Among them are the following: Central Railway, Peoria, Ill., 15 cars, 10 miles; Citizens Electric Street Railway, Decatur, Ill., 4 cars, 5 miles; Metropolitan Street Railway, Kansas City, Mo., 4 cars, 5-40 miles; Omaha Motor Railway, Omaha, Neb., 26 cars, 10 miles; Ottumwa Street Railway, Ottumwa, Ill., 4 cars, 5 miles; Quincy Street Railway, Quincy, Mass., 4 cars, 5 miles; Richmond Street Railway, Richmond, Ind., 6 cars, 4 miles. The company has also closed the following important contracts: Albany City Railway, Albany, N. Y., 32 cars, 14 miles; City Electric Street Railway, Nashville, Tenn., 6 cars, 3.61 miles; Kearney Street Railway Co., Kearney, Neb., 2 cars, 8 miles; Macon City & Suburban Railway Co., Macon, Ga., 4 cars, 4 miles; Metropolitan Street Railway Co., Toronto, Ont., 2 cars, 3 miles; St. Paul City Railway, St. Paul, Minn., 20 cars, 51 miles; St. Paul & Minneapolis Railway, St. Paul, Minn., 20 cars, 20 miles; Union Depot Railway, St. Louis, Mo., 20 cars, 10 miles. A contract has recently been closed for an electric railway at San Jose, Cal., which is the first Thomson-Houston road in the State. As an electric railway has already failed in this city, the selection of another was not made without careful investigation, which resulted in making the contract with the Thomson-Houston Electric Co. Ornamental double bracket iron poles will be used, and nothing will be left undone in making the road a model one in every respect.

NASHVILLE'S NEW COTTON COMPRESS.—Messrs. Miller & Bierce, of Memphis, have just completed and tested for the Nashville Warehouse & Elevator Co. one of the latest improved hydraulic cotton compresses. These presses have but recently come into use. Late improvements in the manufacture of steel have permitted of the more efficient employment of hydraulic pressure. Water gives better results than steam, and effects a large saving of time and fuel. In the hydraulic press the pressure from the steam cylinders is controlled by a shut-off valve, sent through the rams, cut off from the retreating plungers and held against the point of application. The pressure is applied in three hydraulic cylinders 24 inches diameter and 5-foot stroke. Below are the jaws of the press, with a weight equal to 2,000 tons. This total pressure is sustained by a steel pipe connecting the rams with the press. The steel is of the most superior quality, forged at Chester, Pa., and stands an elastic strain of 20 per cent. and a tensile strain of 70,000 pounds pressure. The two steam generating cylinders are 68 inches diameter and 10-foot stroke. These connect with two water-rams, 24 inches diameter and the same stroke. At times the whole pressure strain is thrown on two steel links 10½ inches diameter made of an equally superior grade of metal. The steel in the pipe cost \$20 per foot, and a dozen castings were made before the selection was made. The press, including boilers and attachments, cost \$40,000. The maritime standard of pressure is 22½ pounds per cubic foot, but the hydraulic press readily gives 35 pounds, a marked saving of bulk and freight space. New York, Galveston, Norfolk, Wilmington, N. C., and Brunswick, Ga., have presses of the same style as the Nashville compress.

SUPERIOR SIZING.—Eastwood & Co., manufacturers, Globe street, Fall River, Mass., make a specialty of sizing materials. The importance of sizing in weaving cannot be over-estimated, and the better the material employed the more satisfactory the results obtained. Eastwood & Co. claim for the Slashene sizing that it fulfils all requirements. They furnish a list of strong testimonials attesting the merits of Slashene. They make shipments on trial and supply, besides furnish carpet warps, etc. Trial orders solicited.

GEORGE PEACOCK'S SELMA IRON WORKS. One of the neatest of trade circulars is the catalogue of the above-named establishment, located at Selma, Ala. Mr. Peacock makes specialties of his patent automatic self-oiling tram-car wheels, axles, car irons and mining cars of all sizes and descriptions. The products of his works are fully described and illustrated in the catalogue. Mr. Peacock makes it a rule to employ the best material and perfect workmanship. He claims that his self-oiling wheel is the most perfectly chilled and is the most economical oiler in use.

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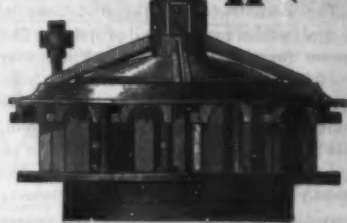
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76 Van Buren St. Chicago, Ill.**

The Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, October 30, 1889.

The iron trade, for the first time in several weeks, may be called quiet. The reason for this is two-fold: First, ever since September opened buyers have been anticipating requirements and now have their wants pretty well covered. Second, this activity in demand has resulted in an upward tendency in prices which has landed them at figures which consumers consider extreme. Both of these causes has driven buyers out of the market, and they are likely to remain out until they can see their way clearly to paying present prices should they be maintained. The opinion prevails in a good many quarters that there will be a little reaction, but, considering all things, it is difficult to see how a reaction can take place. The productive capacity of furnaces is very little in excess of demand, and bar, sheet, plate and steel rail mills are now crowded with orders ranging from one to three months ahead. Besides this, it is learned on the very best authority, financial and manufacturing, that there is a large volume of unfilled requirements yet to be heard from, and the presumption is that when these requirements are presented to the market present asking prices will be very easily maintained. This is the most reasonable opinion to entertain.

There is a great degree of strength in all the iron markets of the country, from Boston to St. Louis. The possibilities are that there will be an advance, provided buyers and users of iron and steel should conclude to purchase this month for winter and spring requirements. So far, however, they have not done so; one reason for holding back is the hope that prices may weaken a little, and another is, the hope that manufactured products may advance a little.

Southern pig iron makers are largely responsible for the very strong condition of Northern iron markets. When it was first stated that they were unable to accept, or unwilling to accept, further contracts, it was looked upon as a piece of artifice to strengthen the market; but when the actual facts became known, their refusal to accept additional business resulted in an advance of 25 cents per ton in the North; it also resulted in a speculative demand from the Ohio valley markets, which was noted two or three weeks ago. That tendency has been checked by the determination of Southern iron-makers not to sell except at certain fixed figures. The iron trade has been further strengthened by the advance of 30 per cent. in Scottish iron markets since the first of the year, and the enormous consumption in progress abroad.

The fact has been recently developed and proven that there is but a very narrow margin between production and consumption, and it is beginning to dawn on iron-makers that there is room, and even need, for more furnaces. The foundations are being laid for two at McKeesport, Pa., and several others are projected at other points.

Quotations for forge iron at tidewater are \$16, with \$15.50 as inside figure for ordinary brands. No. 2 foundry is \$16.50 to \$17, and No. 1 \$17.25 to \$19 from inferior to choice, with \$18.50 as the outside figure that buyers are actually paying. Muck bar markets are strong at \$29 to \$29.50. Steel billets and blooms are in very active demand in all markets, and producing capacity is barely able to keep pace with demand. Nail slabs are \$35.

Merchant iron was not advanced in Philadelphia, as was anticipated, but the manufacturers will meet again next week and possibly unite upon higher prices, but this is considered doubtful, because of the large number of small makers throughout Pennsylvania who are willing to take business at

low rates in order to keep on working. Car lots are 1.90 at mill; store lots 2 cents. Nails are \$2 in large and \$2.10 in small lots. The factories are all busy.

The plate iron mills are crowded with business, and structural iron-makers are obliged to refuse more or less business every day, on account of their inability to make deliveries at the required times. Full quoted rates are obtained. Angles are 2.20; beam and channels 3.10.

The steel rail markets are very strong, although during the past week no very large orders have been placed. Quotations are \$32 to \$32.50 in Eastern mills; \$33 at Pittsburgh, and \$34 to \$35 at Chicago.

HARDWARE.

Reports from all sections of the South and Southwest are very cheering, and the demand for hardware continues good. Prices are very firm. Hubbard & Co. have withdrawn all prices on eye hoes, and have made an advance of 12½%. Hammers and sledges have stiffened considerably, as well as edge tools generally. Axes are very firm at present quotations. Steel goods (handled hoes and forks) are very much demoralized, and prices have been badly cut. Advances have also taken place in screw, hook and strap hinges, crowbars, harrow-teeth, bolts, nuts and other heavy goods.

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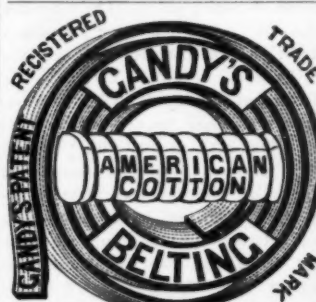
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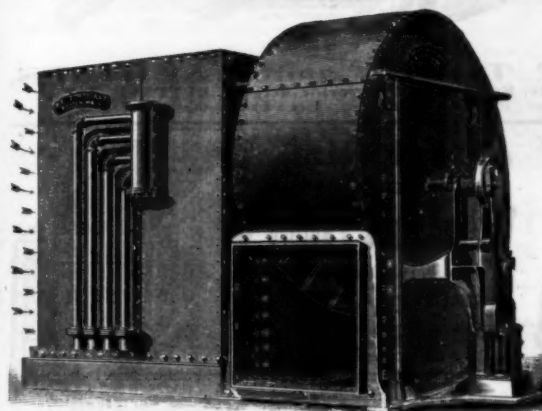
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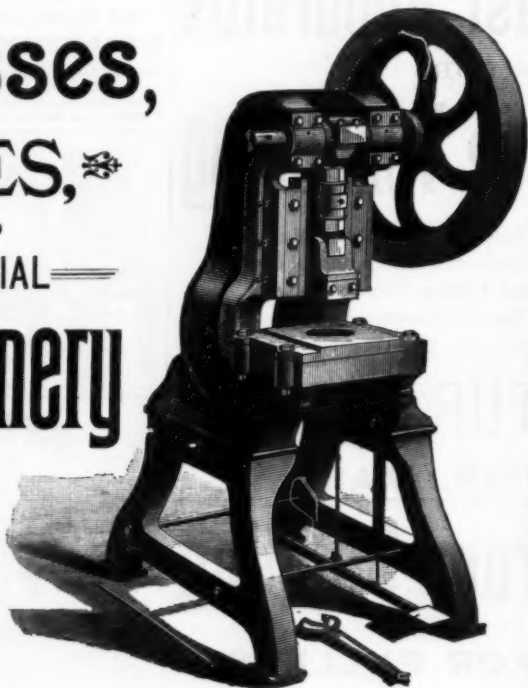
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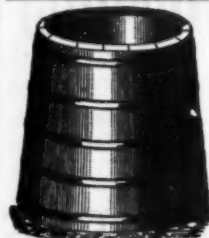
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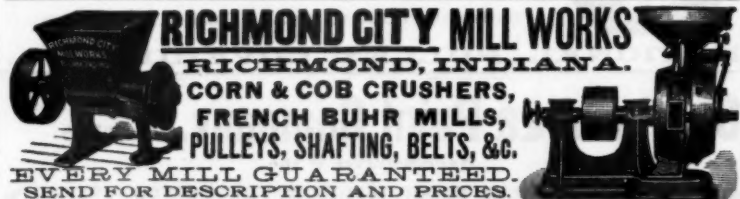
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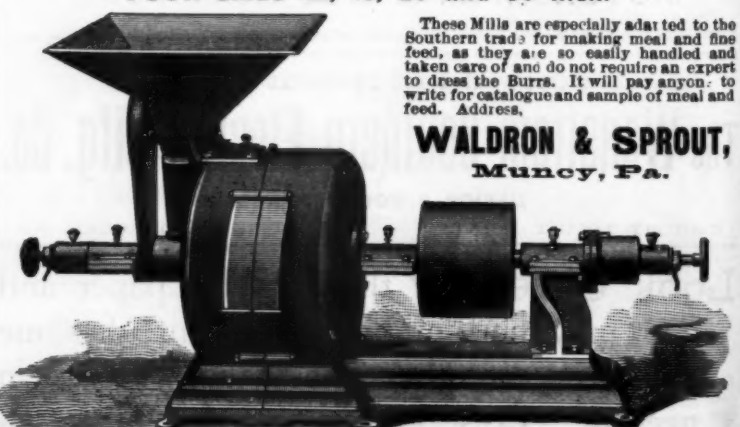
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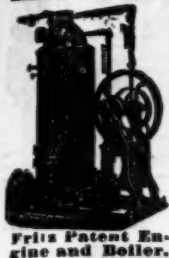
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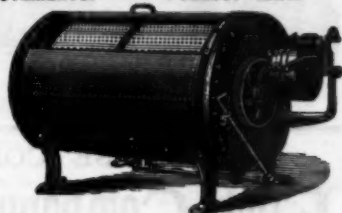
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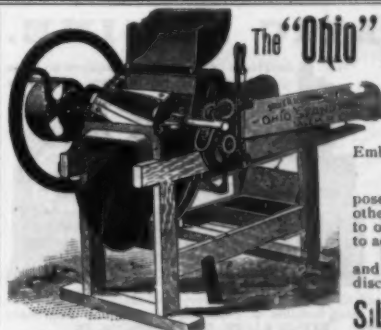


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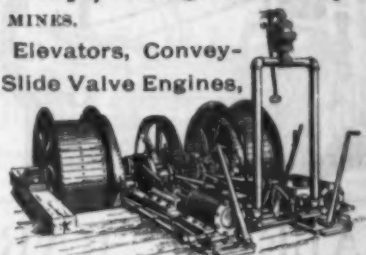
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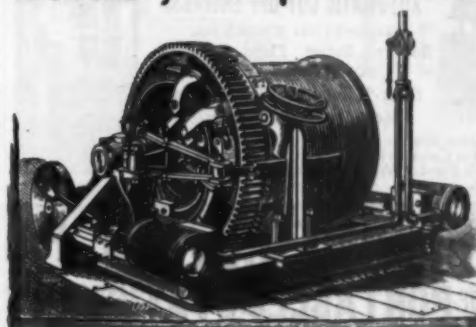
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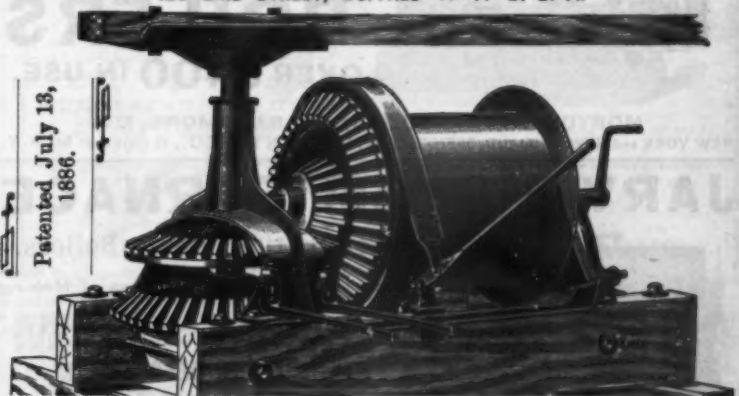
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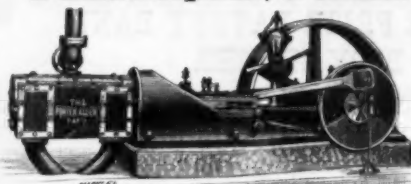
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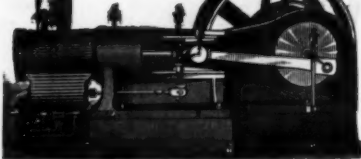
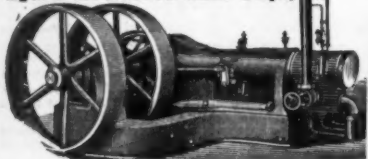
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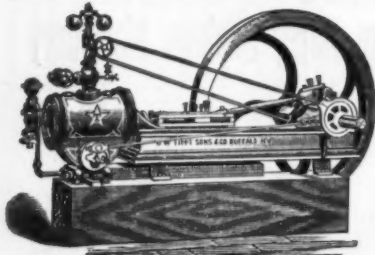
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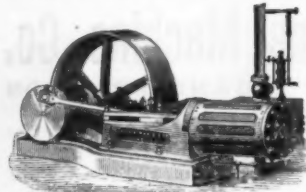
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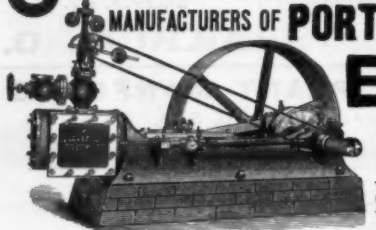
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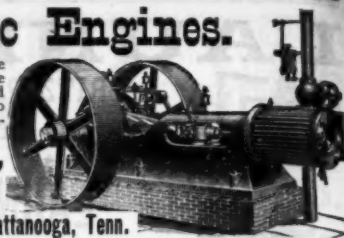
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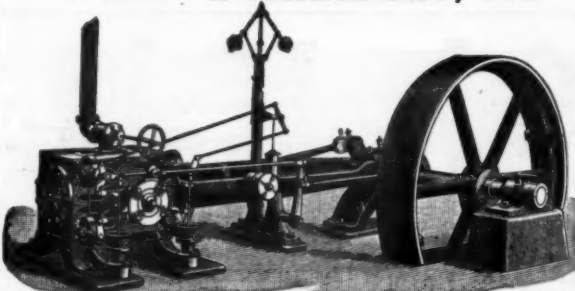
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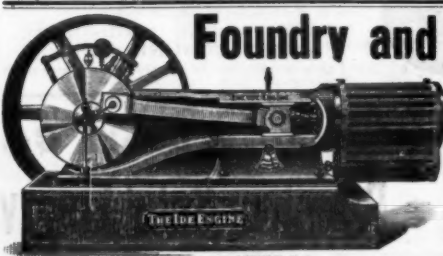
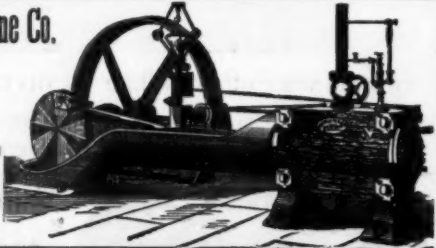
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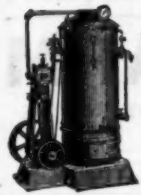
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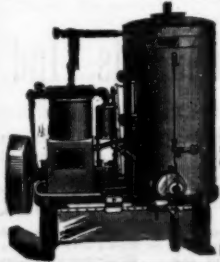
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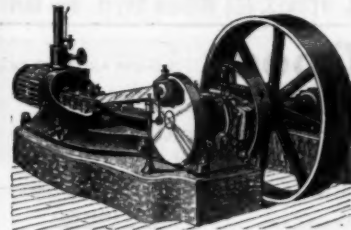
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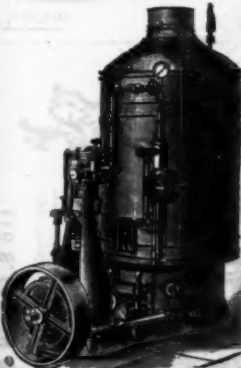
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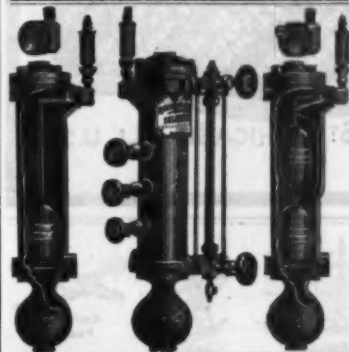
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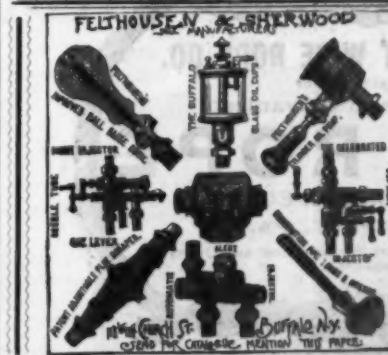


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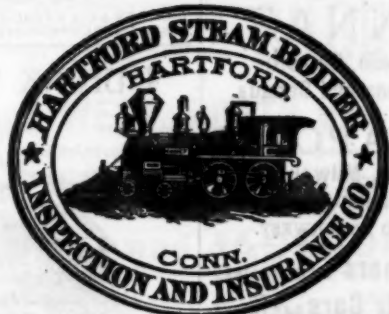
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THE Atlanta (Ga.) Journal says:

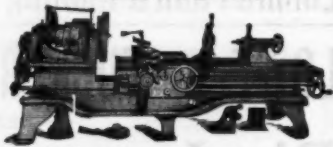
"The exhibit of wood-working machinery made by Messrs. E. & B. Holmes, of Buffalo, N. Y., is really the leading machinery exhibit at the Piedmont Exposition. They show a planer and matcher, a 60-inch segment resaw, a gang edger, the Pacific planer and matcher, a pony planer, the 'Atlanta' planer and matcher, and the Imperial cabinet planer. These machines do not represent their entire line of wood-working machinery, for, exclusive of the above-mentioned machines which are now on exhibition on the floor of machinery hall, they manufacture the duplex shingle planer, moulders of different sizes, and endless bed surfaces. The machines at the Piedmont Exposition are massive affairs, and are marvels of mechanical skill and workmanship. Messrs. E. & B. Holmes are the largest manufacturers of this line of machinery in the United States. Lumber men, planing mill men, and everybody in fact that are interested in fine machinery, should see the exhibit made by Messrs. E. & B. Holmes."

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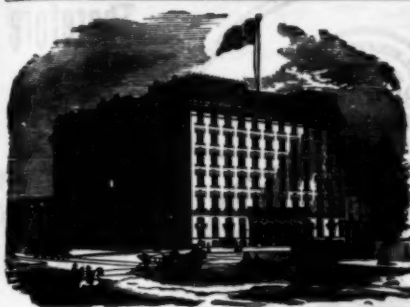
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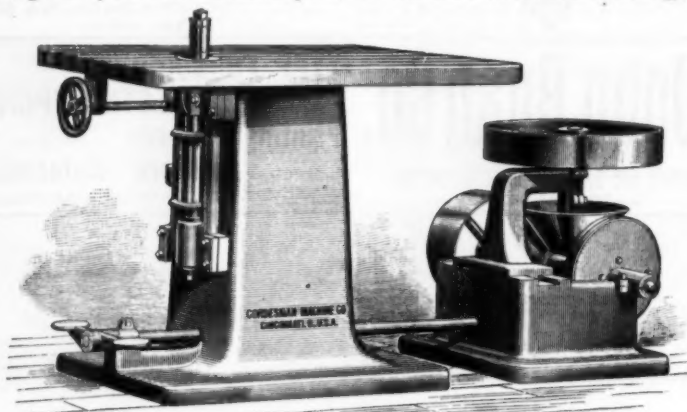
The friction reverse is built very solidly, having a heavy iron frame cast in one piece,

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THE Atlantic Monthly for November, 1889, contains: "Character of Democracy in the United States," by Woodrow Wilson; "The Begum's Daughter," XXII-XXIV., by Edward Lassetter Bynner; "Anteros," by Edith M. Thomas; "The French-in-Canada" by Eben Greenough Scott; "The First Mayor," by Octave Thanet; "Some Romances of the Revolution," by Edward F. Hayward; "Allston and his Unfinished Picture," passages from the journals of R. H. Dana, by Charles Francis Adams; "The Nieces of Mazarin," I, by Hope Notnor; "The Tragic Muse," XXXI-XXXIII, by Henry James; "Materials for Landscape Art in America," by Charles H. Moore; "A Problem," by Christopher P. Cranch; "Marie Bashkirtseff," by Sophia Kirk; Roosevelt's "The Winning of the West"; "Outdoors and Indoors"; "Franklin, Washington and Lincoln"; "The Contributors' Club," "Books of the Month."

THE Popular Science Monthly for November contains: 1. "The Art of Cooking," by Edward Atkinson, L.L. D., illustrated; 2. "Old and New Methods in Zoology," by



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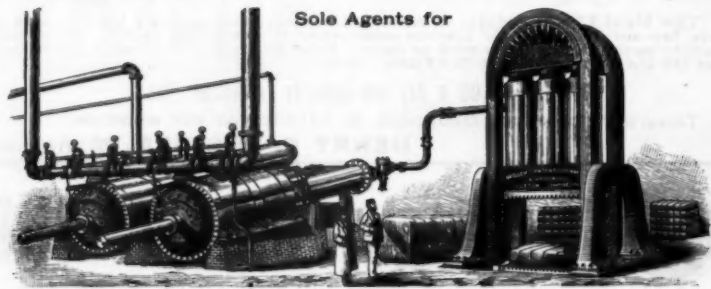
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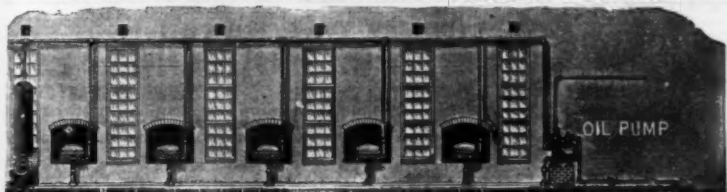
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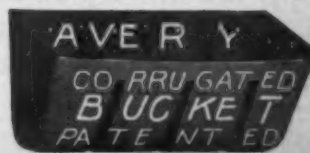
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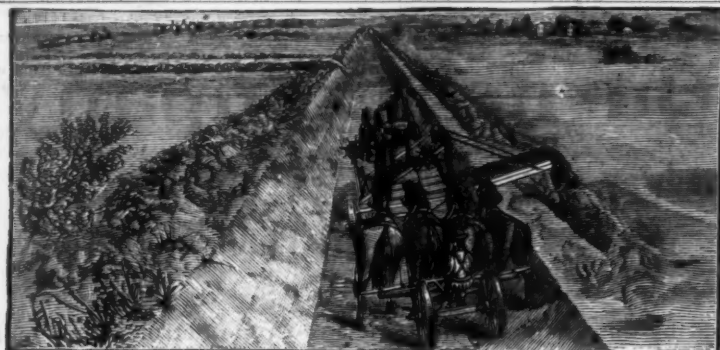
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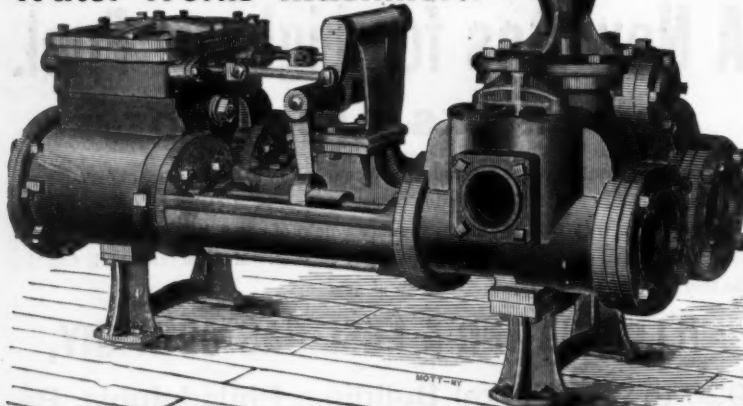
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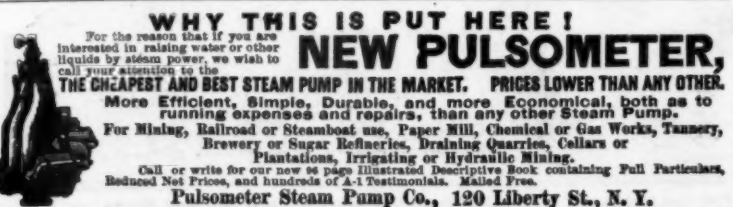
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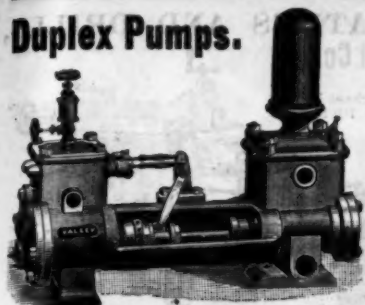
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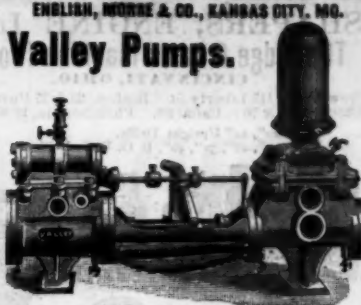
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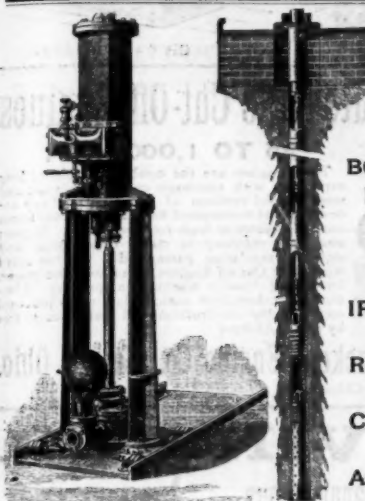
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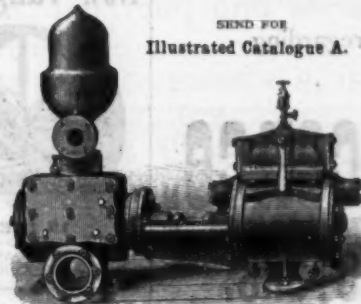
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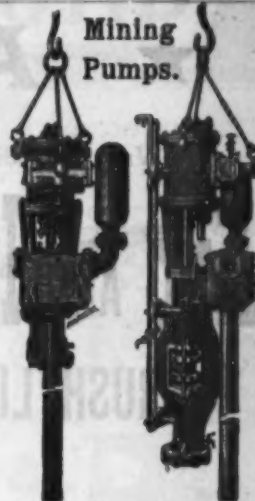
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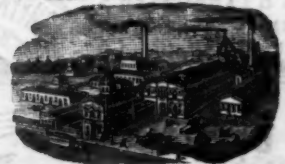
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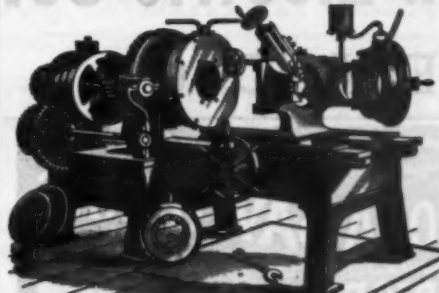
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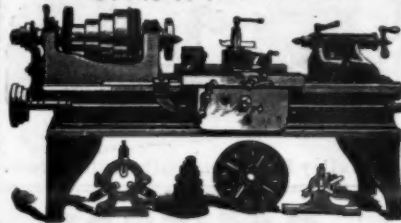
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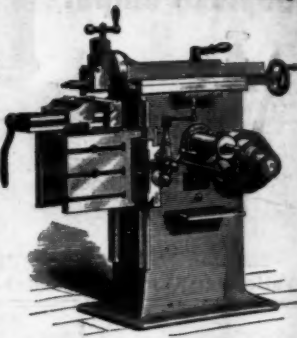
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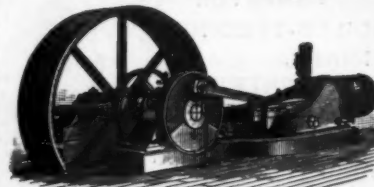
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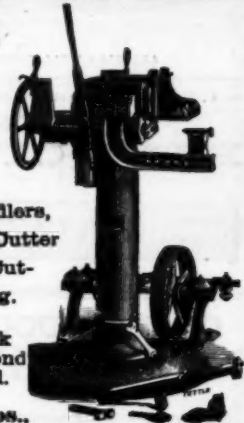
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